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IRAQ: POPULAR ARMY ORGAN DISCUSSES
MILITARY TACTICS AND STRATEGY

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IRAQ: POPULAR ARMY ORGAN DISCUSSES MILITARY TACTICS AND STRATEGY

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 8, Feb 81 and No 9, Jun 81

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POPULAR ARMY USE OF HELICOPTERS DISCUSSED

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 8, Feb 81, pp 64-69

/Article by Muhammad Judu' Kazim: "Airborne Popular Army Forces" /

/Text/ Introduction

A. The use of airborne troops on the strategic and tactical levels in World War Two was limited but developed in the fifties after the Korean War and assumed a new dimension in the June 1967 War and the 1975 war in Vietnam. The use of airplanes, in particular helicopters, ceased to be restricted to activities of transporting units and equipment and served as means of combat which could carry out tactical activities in circumstances which could prove difficult if reliance was made on the potential for ground movement.

B. Border units might be in a state of confusion and imbalance for a certain time as a result of a surprise foreign attack against part of the homeland and infiltration into the hinterland of the country by raiding forces. This is where the role of the various Popular Army forces in the border areas stands out; in their secret bases inside their operating areas, they watch closely over the progress of the enemy within those areas so that they can begin their activity through the medium of secret resistance operations and popular war. Therefore, they will constantly be exposed to sudden dangers and sometimes to extermination, and this requires that constant contact be maintained with them and that they be supplied through the forward lines and flanks by transport on foot or the use of various modes of transport, most important of which are helicopters.

C. Helicopters are considered an important mode of transport and are in keeping with the requirements of the Popular Army, among the most important of which are confusing the enemy, attacking the enemy's stumbling forces, destroying his reserves, taking over targets which have not been destroyed and have regrouped, and holding vital points and remaining in them until friendly forces arrive. Thus it is important that they have the power to operate behind lines and along flanks with great intrinsic resources which will enable them to skirmish with the adversary at once when their objectives are reached. Therefore, they have been equipped, reorganized and trained to attack by air by helicopter as well as to manage infiltration activities on foot and remain behind enemy lines in the effort to prevent the enemy from using his resources effectively in combat. Therefore, we must ascertain the most important tactical aspects of Popular Army forces transported by helicopter, as well as the helicopters which are used, to arrive at a clear idea of the planning and execution of their probable combat tasks.

2. /sic/ Tactical phenomena of helicopter-borne Popular Army forces

A. Mobility: the training and equipping of helicopter-borne Popular Army forces are suitable for movement at short notice and exceptional speed and are accompanied by the freedom to select hostile targets within the range of the aircraft, even if that is across rough ground or areas that are wet or obstructed with bulky weapons which might impede the movement of ground forces. Close cooperation with local inhabitants to form an intelligence network which will supply them and other commands with useful information as a result of the constant surveillance of the volume and movement increases air mobility and consequently enables them to drop in the appropriate areas in time to destroy the enemy there.

B. The movement of people borne by helicopter demands dominance over the air in the target area and the stifling of ground fire, due to the fact that these movements are managed in areas being defended by small units or are in areas destroyed by intense fire.

C. There is no doubt that surprise is one of the most important principles of combat in attaining rapid victory with little effort and scant losses. The Popular Army's chances of attaining surprise increase when they are helicopter borne, in view of the rapid air mobility with which they are distinguished and the changes in activity in flight that helicopters can make, as well as their ability to impose at the requisite speed in order to cope with the new operations of the enemy simply and without confusion. This may be summarized as shifting from one attack direction to another, and this depends on the adequate preparation of combat planning in order to direct the severest blows at the weakest enemy units when they are in a state of movement or brief rest under mere adequate guard, so that it is possible to pounce on them harshly, quickly and unexpectedly, taking a vital point as a target in order to destroy the enemy there, setting up ambusnes along the axis of hostile deployments, attacking encampments and holding critical points in order to support local and central counter-attacks.

D. Helicopter-borne personnel's advantages of movement give them the ability to impose permanent, continuous threats over broad areas, most important of which are rear areas and vital points, thus compelling the enemy to deploy his forces in an attempt to counter the threats. In addition to this, this leaves an effect on the morale of the enemy, keeping him in a poor psychological state and engendering a state of panic and disturbance in his midst, restricting the movements of his units, slowing down his counterreactions and keeping them ineffective. Therefore, air-borne Popular Army forces are able to achieve exceptional results by launching sudden violent attacks and raids which have a lightning effect that is bewildering to the enemy and could almost eliminate their disadvantage in volume and firepower, making the question of their exposure to losses dissolve and disappear.

E. Whatever the type of drop from helicopters may be, the force will remain exposed to danger until regroups, although careful rehearsal and constant proficient training have a great effect in reducing this period to the lowest possible level.

F. The Popular Army needs sometimes intermediate and usually heavy lifts in order to transport reserves for forces resisting infiltration, to make up deficiencies in materiel or rapidly to transport anti-tank weapon detachments in order to close the breaches which hostile armored units might create. Engineering detachments

may also be enabled to lift sections of bridges and defensive equipment and lay mines with the objective of stopping any dangerous armor penetration and breaking its spearhead. These preventive measures increase the need to transport warning forces by helicopter from safe camps to emergency sites that are opening up; in this situation, the roads will be especially crowded and lifting by helicopter by air will be an urgent necessity.

G. Popular Army combat bases perform the duty of resisting airborne unit operations and they must reach the drop area quickly in order to destroy the enemy before it becomes feasible for him to finish regrouping on the ground. The best means for rapid transportation in such tasks is the helicopter.

3. Characteristics of helicopters.

A. Flight ability: Helicopters have the ability to fly and land vertically, move to the side and the rear and hover in fixed fashion over a specific spot for a substantial period of time, increasing their ability to maneuver and the accuracy of their execution of missions, whether for purposes of reconnaissance, transportation or fire support, in various areas at the requisite speed, thus enabling us to concentrate strike efforts at the proper place and specific times. Therefore, they are considered among the best instruments of combat known in this era.

It is worth pointing out that increasing the altitude of /ordinary/ aircraft in the air has an inverse effect on their competence and ability to maneuver, and influences command and control of them, lowering the power of their engine, which, in turn, reduces their carrying capacity, and they have to take off and land in the traditional horizontal manner. A rise in the elevation of the ground above sea level certainly requires increasing the area needed for takeoff.

B. Landing area: Helicopters can land on a level area of a minimum of 25 square meters, on condition that that be free from obstacles that are more than 30 meters high. In the event there are obstacles close to the landing area, the helicopter's load must be reduced to guarantee it a secure takeoff, so that the units elements of movement and rapid transport may be achieved without their being influenced by various ground obstacles or being restricted to easily constructed airports or broad landing areas.

C. Climatic conditions: Helicopters are considered more able to fly at low altitude in bad weather conditions than other aircraft, although they are affected by such weather, since a large number of them cannot fly in conditions of heavy fog, intense wind or foreign bodies falling through the air, since that affects their safety and therefore the ability to use them in movement.

D. Helicopters have been furnished with resources for taking the enemy by surprise, attacking him from areas suddenly, then avoiding his fire, due to high maneuverability and rapid takeoff to a relatively high altitude; their flight at low altitudes conceals them from various electronic detection devices.

E. Due to helicopters' ability to move from target to target and from tactical to administrative task, as well as to their ability to move to loading sites

rather than having to move the loads to the site of the aircraft, and their ability to drop forces with equipment and materiel when necessary, has caused helicopters to realize an important element in combat, which is flexibility in the use of war resources in combat.

F. Internal and external load capacity: light helicopters can carry six persons or less, intermediate ones 24, and heavy ones between 24 and 60; it is possible to compensate for the weight of some or all persons by hanging large-size equipment outside the body of the aircraft, and helicopters can drop loads by using beams, cranes or ropes without descending to the ground--a characteristic which has enabled them to operate on various types of terrain without any significant difficulty.

G. Helicopters are vulnerable to advanced anti-aircraft weapons and also to attack by enemy fighters, because they fly slowly. This makes them an easy enemy target and therefore it is necessary to realize local air superiority or to rely on surprise by using cloud cover, flying at low altitudes or making use of deterrent electronic equipment to thwart enemy radar.

H. Helicopters' balance is considered a source of anxiety since their center of gravity is high: their power transmission systems, overhead propellers and engines are above the center of the aircraft, and therefore flying helicopters for long periods causes the pilot fatigue, and bad landings result in destruction of the aircraft.

I. The costs of helicopters are high compared with other aircraft, and the transportation cost (per ton per kilometer) by helicopter is more than two or three times as great as that of traditional aircraft. In addition, helicopters require large repair and maintenance services, as they are mechanically complex, and therefore their use must be studied and evaluated with exceptional care and weighed against the benefits gained. However, the need for having large numbers of helicopters is underlined by the fact that they are used to save a large number of lives and consequently raise the morale of fighting men when losses are evacuated and early treatment is provided for them before battle wounds start to rot.

4. Categorization of helicopters.

Helicopters are classified in accordance with the nature of their work, as follows:

A. Communications helicopters

This is a light aircraft used for purposes of reconnaissance and correction of artillery fire in forward air command operations by forward air command officers. Nonetheless, it is in its capability to transport a limited load with a number of persons and casualties and it can be used as a dispatch station and radio booster.

This craft is distinguished by its solidity, because of its small size and its excellent resources. Because of its small size and high speed, it is difficult for hostile ground and air defense weaponry to bring it down.

B. Support aircraft

Precision in identifying and destroying the enemy's positions on all types of terrain, particularly hilly terrain thick with forests, makes support helicopters better than traditional ones, and their role is more effective in attacking hostile armored units, since these craft have the ability to carry different types of free missiles, guided missiles and machine guns.

These craft are distinguished by their relatively high speed when compared with other helicopters; therefore their opportunity for combat, disengagement and rescue is greater. The success of support helicopter operations is founded on two elements, the intensity of the fire directed at the strike force and the mobilization of the greatest possible number of helicopters for support missions; modern advanced sighting and firing equipment and forward radar detection equipment work to increase the effectiveness and combat ability of support helicopters and their influence over support operations.

C. Transport helicopters.

Transport helicopters generally are heavy, since they are basically designed to carry the greatest volume and the heaviest load possible in order to alleviate the burden of ordinary transport aircraft. This type of craft can carry close to 30 tons of equipment and materiel. This type of aircraft is also the most fragile and vulnerable to the enemy's anti-aircraft weapons, and its successful use depends to a large degree on the climatic situation and the nature of the operations theater in general. The method of landing and disposing of persons and equipment from helicopters is as follows:

First, holding to on the ground, in the event the ground is favorable and there is no hostile resistance.

Second, hovering at an altitude ranging from 1 to 2 meters, where materiel and equipment are thrown out and the persons jump out easily from the helicopter, if the ground is not favorable or there is a likelihood of hostile resistance.

Third, hovering at an altitude ranging from 10 to 15 meters because of certain obstacles. The lowering of people takes place by rope ladder and the equipment and materiel are thrown to the ground in special nets.

Planning for Helicopter-Borne Personnel Operations

5. During helicopter operations planning, it is necessary to observe the following considerations:

A. A high level of training for every aircraft crew and Popular Army force detachment.

B. Dominance by Popular Army forces of the drop areas specified in the operation, methods of mounting, descending, and bearing equipment and supplies, and knowledge of ground signals for guiding helicopters.

The helicopter crew must also absorb and understand the problems of ground units.

C. Performance of joint drills and exercises before starting actual operations.

6. Considerations for planning helicopter-borne Popular Army force combat operations are not essentially different from other movements, as long as the forces are trained in the use of helicopters in accordance with set operational contexts.

7. It is necessary to form a "joint task force headquarters," which will be directly linked to the higher command, in which Popular Army command staffs and assigned command officers, as well as helicopter pilot officers and an air strike officer, are represented. These headquarters will do the following:

A. Evaluate the strength of the enemy, study the nature of the area and determine the weather.

B. Specify the task and allocate the force necessary for executing it.

C. Calculate the air effort needed to execute the operation and at the same time alert the task force.

D. Set out the following plans:

First, the tactical ground plan (to study the ground plan with the ground support plan and the ground air support plan offered by traditional aircraft and helicopters).

Second, the drop plan, selecting a drop zone for helicopter forces in various areas, providing easy approach axes to the target.

Third, the air movement and transport plan, to select the most appropriate air passages and guidance points to control transport movement and their effect on anti-aircraft resistance in terms of location and transport and on the ground plan itself.

Fourth, administrative support to prepare loading lists.

Fifth, preparation of an alternate plan to make adjustments for unforeseen circumstances, such as a breakdown in communications, the enemy's adoption of unexpected conduct, changes in the weather, and unexpected hostile intervention in the drop zone.

8. After deciding on a final plan, freedom to execute its details will be left to the task force commander. This does not mean abrogating the freedom of action given him in maneuvering and selecting targets. He distributes the force which is to be lifted in the form of detachments while determining the number of craft it is feasible to use and the load capacity of each craft (which is influenced by a number of factors and must therefore be clearly labelled on the craft before embarkation) and making sure that all units have understood their pattern of distribution among aircraft, by allotting each detachment to a craft in accordance with the number of airlifts.

9. The elements in the force must prepare the following:

- A. Cloth drop pieces.
- B. Wind direction guides.
- C. Colored smoke grenades.
- D. Flare guns with a suitable amount of colored flare equipment.
- E. A forward ground communications device to maintain contact with all types of friendly aircraft.

10. Upon arriving over the target, the force must prepare to disembark, in accordance with the following conditions:

A. Approach to the target and ordinary descent onto it, in case of an air transport operation, when the ground is favorable for descent and there is no enemy threat.

B. If there is a likelihood of enemy intervention in the drop zone, the air drop will be as follows:

First, the support helicopters will hover continuously over the target in order to observe existing enemy movement there and deal with him in the event he is firmly ensconced. Bombers and close support aircraft may be assigned to that and exits from the target must be given special attention.

Second, transport helicopters armed with rockets may fire missiles into the drop zones if there is a need for that.

Third, the apertures of the craft will be opened and the force's guns will be aimed at the target.

C. In the event a clash with the enemy is confirmed, assault by air will be as follows:

First, artillery will fire on the target zone before the time for landing, on condition that the artillery fire not cause the loss of surprise and that in addition it be coordinated with utmost accuracy when necessity dictates that fire be cut off and that all cannon muzzles be stilled a suitable period before the craft reach the target zone, with attention to the line of fire, determination of the direction of flight, and the subsequent approach of aircraft.

Second, the support helicopters will hover over the target to deal with enemy positions or all other sites where the enemy is suspected to be present.

Third, the transport helicopter apertures will be open and the guns of the force being transported will be ready to fire from them.

Fourth, the armed transport helicopters will fire missiles at the drop zone, then the force will disembark while the craft are hovering at an altitude of no more than 2 meters.

Fifth, the support craft will continue to strip the enemy and destroy him along the probable approach routes and will fire on zones which have been taken over.

11. Disembarking from the craft.

A. The signal to prepare to dismount will be given by the dispatch commander before the craft drops, at which time each fighting man will lean forward in his seat to make sure that his equipment is not entangled with the seat or the equipment of his comrade by his side. The technician in the craft will open the side door of the craft.

B. Upon receiving the signal from the pilot, the force commander will give the order to disembark by issuing the executive order "dismount."

C. The force commander will disembark from the craft first, followed by the fighting men seated to the left, then followed by the group on the right. The assistant force commander will be the last person to disembark from the craft, and he will be the one to give the signal for the craft to take off after he has ascertained that it is empty of all persons, weapons and equipment.

D. The fighting men will spread out in a state of air drop/air assault immediately upon disembarking from the helicopters and will rush as quickly as possible to the closest cover and begin observing in all directions.

12. Action after disembarking.

A. The first action the force commander will take immediately upon dismounting from the craft will be to head north, feeling his way, and guide the map with the objective of determining his unit's location vis-a-vis the target, then, once his unit has become completed, lead it toward the target.

B. Inform higher headquarters, contact combat bases and friendly detachments, and coordinate cooperation with them.

C. In the event the situation is favorable, provide cloth for the craft descent, determine the wind direction and appoint a guide to receive the other craft coming in.

Conclusion

13. People's war means fighting to crush the enemy materially and morally, smash his economic base and destroy his war resources until victory by using various means of combat, including helicopters.

14. Helicopters are marked by numerous characteristics, such as air mobility in unit combat operations, enabling them to fight in any location that requires their presence and the provision of fire support for these combat bases, in addition to flexibility in use and surprise of the enemy, which are two of the most important elements of victory in combat.

15. Helicopters have become the most effective means for helping the Popular Army convey equipment, ammunition and forces to combat zones in a short time. They require precise tactical planning, proficient planning and the constant rehearsal of work sequences in order to eliminate errors which might arise on arrival at the target or the fighting, in the event of transport by air, an air drop or air combat.

16. From the foregoing the importance of the use of helicopters in all operations in modern war, especially in the combatants' battle against the enemies of the homeland and the nation, is clear to us in a manner admitting no doubt.

Sources

A number of military journals.

A number of bulletins issued by the Iraqi Ministry of Defense.

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USE OF POPULAR ARMY IN OVERGROWN AREAS DISCUSSED

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 8, Feb 81 pp 152-156

/Article by Lutfi Kamal Ibrahim: "Fighting in Forest and Overgrown Areas" /

/Text/ Introduction

1. Combat in forests and overgrown areas includes the conduct of movements in areas covered with forests and dense vegetation in which there may be deep ravines, high ground and marshes.
2. Forests and overgrown areas constitute an exemplary area for guerrilla war, and the conduct of movements in such areas requires that the command have a high degree of innate innovativeness in order to cope with the problems arising from the climate, the nature of the area and the presence of dense forests.
3. Knowledge of the terrain is an important matter, and the commanders of Popular Army formations must obtain information related to it through prior reconnaissance. It is necessary that information on climatic and seasonal changes which frequently occur in the movement area continue to be acquired.
4. The complexities of combat in such areas can be overcome by good training, the preparation of careful plans and proper acclimatization.

Natural Characteristics

5. Herewith are the natural characteristics of forest and overgrown areas:

Climate

First, climate is the dominant element in combat in forest and overgrown areas, not just because of its effect on persons and equipment but also because of complications in the nature of the terrain itself.

Second, intense heat and excessive humidity affect radio equipment, artillery fire, leather equipment cases, food and other supplies.

Third, diseases and epidemics spread rapidly and individuals' resistance to these diseases declines, leading to listlessness, a decline in people's vitality and substantial sweating, which influence the morals of enemy personnel.

Fourth, after rains, the ground becomes slippery and river and stream water turns into torrential floods eliminating and wrecking roads.

B. /sic/ Natural obstacles

There is a likelihood that the following natural obstacles will be present in such areas:

First, primitive forests (winter forests).

These forests are essentially natural, since high trees are abundant in them along with certain plants and secondary shrubs which are generally in great density along the banks of streams. In most cases, these forests consist of high trees along with dense, prickly, twisted plants. In dry areas there are short thorny forests where visibility is limited and does not go beyond 50 meters; traveling on foot within them is usually possible, however.

Second, secondary forests.

These forests consist of old thickets whose tall trees were cut while the remaining trees were left to keep growing. The trees there are generally short and dense and in some cases consist of bamboo. It is difficult to advance within such forests and they require the opening of passages by the use of hatchets for cutting trees, making movement inside them difficult and reducing visibility to just 2 meters.

Third, swamps and depressions.

These are generally hard to pass through by foot or to navigate by boat, except for certain special channels in which weeds proliferate, and they are infested with diseases.

Fourth, rice fields.

Rice fields are considered the basic crop of most forest and overgrown areas; when there is level ground that can be irrigated, that is allotted to the cultivation of rice. These fields remain covered with water throughout the growing season and therefore cannot be crossed by vehicles with tires. Even the adjacent ground is unfit for traffic by vehicles with tires, since it consists of drainage areas. These cultivated areas can be suited for the passage of persons and provide only modest cover.

C. Means of communication.

First, regions covered with forests in which overgrown areas and swamps are widespread have few roads, railways, airports or major barriers. The roads which are easy to use are generally narrow and unpaved and most bridges are primitive and unsafe for traffic. Large rivers are generally crossed by causeways and in areas of hills and high ground creeks that exist to be crossed by fords or narrow causeways and the roads have sharp curves.

Second, the road system usually will not bear the traffic of heavy tires on wheeled vehicles or a flood of heavy, constant military traffic. Some vehicles with tires

have managed to operate off roads in specific areas only and at specific times only in specific periods of the year.

Third, waterways can be used as means of communication and they are relatively useful in spite of the resulting slowness of movement.

D.. Diseases.

A. The nature of the weather and the proliferation of swamps, weeds and insects make these areas a great vortex for the growth of reptiles, insects and bugs and the spread of epidemics and diseases, especially such endemic diseases as malaria, diarrhea, typhoid and inflammations from worms.

B. The diseases and epidemics which generally spread among enemy troops inflict losses greater than those from combat.

C. In 1943, British losses resulting from epidemics as compared with losses from battle were at a ratio of 160 to one /sic/, and diseases and epidemics were one of the elements that accelerated the collapse of the Japanese army in the Pacific and southeast Asia in 1945.

The Effect of Forests and Overgrown Areas on Military Movements

6. Herewith are the factors which forests and overgrown areas dictate for the movement of the enemy's military units:

A. In forest and overgrown areas, scope for surveillance, fire zones and communications is limited.

B. They guarantee good concealment from air and ground surveillance.

C. Good roads are rarely common in such areas.

D. Forests and growth help the approach to areas close to military units.

E. Untrained units become nervous as a result of the vigilance and attention against surprise attack by guerrillas that is required. Guards constantly imagine that the scope for surveillance is slight and that the enemy is approaching them by stealth, and these imaginings increase the enemy's nervousness.

F. Movement by armor and on wheels is limited to narrow areas, visibility there is limited and the units are exposed to guerrilla ambush.

G. Forests and overgrown areas impose some limitations on artillery, such as difficulty of surveillance and the lack of feasibility of adequate areas for opening fire; it is difficult to destroy the enemy's fortified positions with artillery fire owing to the difficulty of keeping direct fire in play.

H. Radio range is reduced as a result of the effect of the barrier of dense vegetation and high trees.

7. General principles for liquidation.

A. It is necessary to clear out forests at the greatest possible speed. Speed requires that forests be surrounded by fire before starting the liquidation, lest the enemy be able to escape or his auxiliaries be able to enter the forests. Light machine gun detachments are the best means to ensure this objective.

B. If the forest is very dense, it is not in the power of the fighting man to examine more than 5 yards along the front. This portion must be surrounded by fire and the arrival of a greater force must be awaited.

C. Try to deduce what the enemy is doing inside the forest and where he wants to go, and try to drive him to the ground and spontaneously kill people who are in front of ourselves in order to destroy and surround the enemy force there.

D. Try to drive the enemy toward good combat zones in a single open area so that the task of light arms and automatic rifles will be very easy, and he will be eliminated and not given a chance to escape.

E. It is necessary to preserve a mobile reserve to cope with the enemy, who might save himself and flee. The best site for such a reserve is between the forest and the enemy's route of withdrawal toward his units, to cope with any force that comes to help the enemy and fail to give the enemy scope to intervene in the liquidation process.

F. It is necessary to establish a smoke screen in front of the forest to conceal the advance to the edge of the forest. Sixty-millimeter mortars and smoke grenades are the best means for creating a smoke screen, along with observation of the wind direction and adequate time.

G. The basic strategy of liquidation is to pin the enemy force down on the front and cut off his line of communication. At that point the enemy might resort to launching an attack to reopen his lines of communication or he will be compelled to withdraw, which will result in his undergoing big losses, especially in arms and heavy equipment, which are hard to evacuate.

H. Sites which have been well prepared can continue to resist, in fact must be taken over by being overrun.

I. The enemy's forward communications lines in forest and overgrown areas are vulnerable to hostile ambushes, and small ambushes are very effective in overrunning them.

J. Attacks on defensive areas situated close to the edge of the forest are like attacks on all prepared defensive areas; a nearby edge, or ground obstacle near which the edge is situated, is considered a target. If it is necessary to launch an attack on an area totally exposed to enemy surveillance and fire, it will then be necessary to do so under the cover of smoke or darkness. The methods of attack that are used are similar to methods of attack against a prepared defensive position.

K. Training in the context of group action is very important in overcoming the enemy that is present inside the forest, and it is necessary to train in moving rapidly from tree to tree, take cover from the trees that are spread about, closely observe the trees, woods and ground while advancing, avoid open spaces, and make the best use of the ground (field craft).

Popular Army Formation Raids on Enemy Bases

8. The Popular Army force is broken down into the following sections, for purposes of cleaning out a forest which has been isolated from the enemy:

A. Barriers: these consist of light machine gun detachments which surround the forest with their fire in order to interdict and kill anyone going into or out of the forest. The machine gun site must completely cover the flank allotted to it.

B. The liquidation team: this consists of two groups, which are assigned the task of liquidating and dividing the front up between themselves. Each group goes over the section allotted to it with a fine tooth comb. One team is called Liquidation Team One and the other is Liquidation Team Two.

C. The two support teams: this is a third group, broken down into two sections, each one belonging to a liquidation team, which it follows during the liquidation process at a distance to ensure contact between them. The first is under the orders of the group commander and the second is under the orders of the assistant. The task of this group is to support the two liquidation groups immediately upon request.

9. The sequence of action.

The following sequence will be followed in liquidation of a forest by Popular Army fighting men:

A. The liquidation force commander will observe and study the situation from a higher position in order to investigate the orders and coordinate the liquidation plan, observing the direction from which he wishes to liquidate the forest and the sites of equipment, mobile reserves, jumping off spots, camouflage, and the smoke screen site.

B. He will request a group of orders, and his verbal orders will be issued in the same sequence, showing the subdivision of his forces, their tasks, their positions and the method of liquidation.

C. The group commanders will summarize the orders to the barriers (machine guns) and they will move to occupy their positions. The mobile reserve will then move in order to occupy its positions, with the support of the barriers (the far barrier will move with the support of the two near ones) while at the same time the group commanders will issue their orders to the fighting men. These generally include the liquidation group commander's orders, a determination of the fighting men's tasks, a breakdown of the front among them, and a determination of the person in charge of raising the handkerchief (the signal).

D. A smoke screen will be set up, and the signal to advance will be given by the liquidation force commander after the smoke spreads out. It is not permissible to advance until the barriers and the mobile reserve have occupied their positions.

E. The persons conducting the liquidation will take cover in a regular line parallel to the edge of the forest which has been chosen as the first springboard for penetrating. The persons conducting the liquidation will enter along the same line on the right and left edge of the forest. It is necessary to examine every foot carefully, and the speed of advance within the forest will be at the rate of the slowest fighting man. Movement will take place from tree to tree and from fire position to fire position, and the signal will be given by handkerchief or white flag from both sides of the forest in order to ascertain the distance the liquidation groups have reached. When any part of the line of persons conducting the liquidation confronts resistance, everyone will take cover in regular order and open fire in the direction of the resistance, on condition that he learns the approximate position of the enemy.

F. The people conducting the liquidation will observe their front during the advance and will carefully examine the ground before them while observing straight progress within the forest and opening fire on every position which is fit to be a hiding place for the enemy.

Staying behind Enemy Lines

10. Forest and overgrown areas give unlimited scope for infiltration operations. The following methods will be followed in attacking the enemy's communications lines by Popular Army units.

A. Combat patrols composed of one or more groups which will attack the enemy's communications lines.

B. A force estimated at one or more combat bases which will set out from a fixed base. This base will be supplied by air, land or sea.

Conclusion

11. Forests and overgrown areas are considered exemplary areas for guerrilla war and combat by means of people's war. It is in the capacity of a few men of strong determination to impose a blockade on a large hostile force for a long time in such areas.

12. During any stage of attack or defense, it may happen that small groups of the enemy will hide in forests and overgrown areas cut off from the homeland for purposes of setting up ambushes, obstructing communications and affecting morale. Activities of this type are for the most part done by people who drop in by parachute and airborne units. Therefore all Popular Army fighting men must train starting with peacetime in methods of fighting in forest and overgrown areas and methods of cleaning them out of the enemy.

Sources

1. Staff College lectures.
2. Infantry School lectures.
3. Special Forces School lectures.
4. General observations from various military books and publications.

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VARIOUS STAGES IN PREPARATION FOR WAR WITH IRAN DESCRIBED

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 8, Feb 81

/Article by Sa'id Hamu: "War Preparation by the Motherland"/

/Text/ In the name of God, the most merciful and all-compassionate: "Prepare for them whatever force and whatever cavalry you can, so you can terrify the enemy of God and your enemy with them." A saying of almighty God.

1. The war we are talking about here is war the motherland wages to defend its being and its existence. We do not mean colonial or aggressive war. Therefore, the purpose of the war is to protect the motherland from its enemies, whoever they may be.
2. Many writers have written on this important subject (war preparation by the motherland) and have focused their attention on some aspects of it, especially the military ones. However, they have not investigated other aspects with as much detail and attention. Therefore I consider it useful in this article to deal with these aspects, in particular the issue of civil defense and the psychological aspect. As for the aspects on which they have focused their attention, I will deal with them briefly in order to be of well-rounded use and complete the subject.
3. The nature of modern war, with the destruction visited upon towns and property and flagrant loss of life it entails, the suffering that befalls the countries it embraces, and the motherland's money, economy and powers that are drained away (not to mention its psychological and moral effect, when comprehensive weapons of destruction are used in it), all require a nation which has a strong army and economic, moral and scientific resources, believes in its life and independence, is aware of its responsibilities and is able to endure the circumstances of war and prepare and sustain its requirements however long the war may last. In order for the nation to be at the requisite level, take part in these wars and emerge victorious from them, it is necessary to prepare it in advance in peacetime. The degree to which it is prepared for war will depend on its human, military, scientific, financial and economic resources, its geographic and strategic position, the existence of allies for it, the intentions, plans and resources of its enemies, and so on. In order for the nation to be able to wage such wars successfully it must meet many requirements and perform many activities in peace and in war.
4. Requirements and activities which must be met and performed to prepare the nation for war:

The most important requirements and activities which must be met and performed, in peace or in war, to prepare the nation for war are:

A. Political Leadership, Management of the War and the Political Program

First, political leadership and management of war:

The political leadership of a country preparing for war must be equal to its responsibility, be competent, able and aware of its duties, interact with the motherland, give its people a superior example of national sacrifice and self-denial and share with it the bitterness of war and the elation of victory. This will result in getting the motherland to give it its absolute confidence, back it up, generously offer sacrifices of its dear sons and its wealth, exert effort, and endure difficulties in order to preserve its independence and its life, while, to the contrary, if it is not feasible for it to perform its national and domestic duties in war it will ultimately fail to lead the motherland and manage the war. The duties of the political leadership are very numerous and important: it is responsible for preparing the motherland for war in the military, political, economic, financial, agricultural, industrial, moral, publicity, and social senses and to sustain them during the war, as well as managing the war and leading the motherland to victory.

Second, the political program:

The political command follows a political program which will realize the nation's higher national interests and goals and will preserve its independence.

The political program includes the following:

1. Foreign policy: the government creates allies for itself among other countries and tries to increase their number. It concludes political, military and economic treaties and agreements with them and consults with them in order to coordinate their plans in all fields. Good relations and proper intentions must dominate relations between it and its allies.

In another area, it weakens the enemy in all areas; in particular, it strips him of his allies.

2. Domestic policy: the establishment of harmony and cooperation between the political leadership and the motherland is a very essential, vital matter because government in the modern era seeks the aid of the motherland in critical and strained times. The latter must defend the government (the political leadership) and itself. Therefore the government's domestic policy must be focused on close solidarity in the homeland and the unification of its ranks; otherwise, it will not be feasible for it to wage and manage war and lead the nation, and indeed will not be feasible for it to lead it in peace either. Thus it is apparent from the foregoing that the political responsibilities of a nation which wishes to preserve its being and independence in war are many, indeed are overwhelming. It must assume them boldly and carry out all their requirements, as a consequence of which it is necessary that the motherland form solidarity with the political command.

B. The Military Aspect (Preparation of the Armed Forces)

As we have mentioned above, many books have been written in detailed fashion on the manner of preparing armed forces for war. Therefore there is no need to repeat that, although I do consider that it is useful, indeed necessary, to mention it briefly. There is no doubt that the responsibility for protecting the motherland lies on the shoulders of its armed forces. Therefore, they must be prepared in peace, and their growth requires great continuing material and moral effort which depends on many factors, most importantly the human, economic, scientific, and political factors, the country's strategic and geographic position, the duty expected of the forces, the strength of allied countries, the scope of their cooperation, and finally an understanding of the enemy's intentions, plans and resources.

The armed forces derive their life from the depths of the motherland, as a palm tree derives its nourishment from the depths of the ground. Their fighting ability and the extent to which they can continue fighting depend on the support the motherland has given them (men, money, moral support and the other ingredients of war). The longer the war lasts, the greater the dangers become along with the armed forces' need for material, moral, psychological and spiritual support. Therefore, the nation must not stint its armed forces in men, money and so forth, so that they may be able to protect it. In another area, the armed forces must most bravely and trustworthily perform their duties inside or outside the country in accordance with the policy of the country and always enjoy the nation's good will.

For the armed forces to be able boldly to take part in war, they need the following:

First, command preparation: It is necessary to prepare the command on the basis of good officers who enjoy competence, bravery, and command intelligence and physical ability in the event of the creation of a form of military alliance with other Arab countries, since it will be necessary to create a higher command and appoint a general commander for these armies.

Second, war plans: The country's military command will set out military plans in peacetime to ensure the nation's goals, and these will be developed and coordinated from time to time in the light of both belligerents' development of weapons, military equipment, electronic equipment and so forth. It is natural that this development and coordination of plans will apply to the plans of the higher command of the allied countries as well.

This development depends on the existence of up-to-date, precise information on the organization, armament, and equipment of the enemy, increases in the size of his armed forces, and his plans and intentions. Whatever the case may be, it is necessary to specify the following points most clearly and carefully in the plan:

1. Areas of concentration.
2. Combat areas.
3. Remote and nearby strategic targets.
4. Axes of advance.
5. Preparation of alternate plans.
6. The pursuit of surprise and shift of the war to enemy ground.

Third, formation of a war cabinet: Shortly before the declaration of war, or at the start of the war, the government will announce the formation of a war cabinet whose task will be to administer the war, facilitate the activities and duties of the military command and provide all the requirements of the armed forces so that

they will be able to perform their war duties as thoroughly as possible. This cabinet will normally consist of the ministers of defense, the navy, air, planning, industry, trade or economy ministers, and any minister or other person who must be present in this cabinet.

Fourth, the plan for the call to arms: The military command will prepare a good plan for a call to arms in peacetime to apply during war. This will include the callup of persons able to bear arms in the country to the armed forces.

Execution of the plan for the call to arms (general mobilization) and performance of the massing of troops in the shortest possible time demand the provision of the necessary means of transport and the mobilization of the various media.

Performance of peacetime exercises for carrying out the call to arms will facilitate and expedite its execution in war. The success of the plan for call to arms depends on many things, most importantly:

1. A good plan for call to arms: this is modified from time to time in the light of newly arising matters on which it depends.
2. The performance of exercises in application of the plan for call to arms on appropriate occasions, the retaining of various new formations, and their participation in training and maneuvers.
3. The presence of a system of roads and railways and knowledge of their capacities and capabilities, along with indication of changes in their schedules.
4. The provision of means of transport necessary to move strategic units and formations to areas of concentration. This requires the performance of a survey to determine their numbers and types and /word illegible/ them and their notation in a register.
5. The provision of competent means of communication. It is clear that it is necessary to use radio and television systems for this purpose.
6. Preparation of uniforms, equipment, weapons, various forms of vehicles, spare parts for them, and so on, so that requirements may be met and some of them may be retained as a reserve.
7. Performance of a broad campaign of enlightenment both in peace and in war preparatory to applying the plan for the call to arms. It will be necessary to mobilize the media for this purpose.
8. The adoption of strict legal measures against people who fail to join their units.
9. The provision of subsidies for drafted ranks.
10. The appointment of competent staff officers to set out the plans for a call to arms, drill in the plans during peacetime and execution of them in war.

Fifth, armed forces training: It perhaps goes without saying that we can show that good training accompanied by good discipline and high morale are the spirit and foundation of the army and that that is a very important matter, indeed an important fact. Therefore it is necessary to stress this fact constantly and without letup so that the armed forces may reach a very high level of training in their fields of specialization.

Sixth, preparation of armed forces reserves: It is necessary to ready, store up and accumulate all the requirements of the armed forces so that they will be enabled to continue the war, however long it takes. The most important of these are the various weapons and their spare parts, such as materiel, various vehicles, airplanes and their spare parts, naval vessels and their spare parts, fuel (the nerves of war), technical equipment, electronic equipment, uniforms, special technical equipment for them, provisions, and so forth.

Seventh, air bases, airports and landing fields: War requires the preparation of the air bases, airports and landing fields used in the country in peacetime and it is necessary to increase the landing area for use in cases of emergency landings. It is possible to use appropriate streets as landing fields or temporary airports and thus it is necessary to take this into account when the streets are opened so that it will be possible to use them for that purpose.

The presence of trees in such areas greatly helps hide aircraft when air bases, airports and landing fields are built. It is necessary to observe the tactical, strategic defensive, technical and economic aspects and provide a radar system to cover every area of the country, and concealment and so forth should be observed. It is necessary to construct shelters for aircraft in air bases and airports starting in peacetime and it is necessary to provide telecommunications for them as well as terrain for landing.

These will be protected by allocating anti-aircraft, ground/air missiles and perhaps balloons, and ground protection will also be provided for them.

Eighth, naval bases and ports: Coastal countries construct naval bases, fortified harbors and ports required for their fleet and their naval vessels in peacetime. In constructing them, attention is given to tactical, strategic, defensive, economic and technical aspects (water depth, tides, the effect of wind, and the fitness of the coast for the approach of vessels) and the protection afforded by the nature of the coast (such as the bases at Iskenderun and Haifa: the nature of their coasts is exemplary protection for a naval base, danger threatening the country and so forth). On the basis, they are constructed in suitable sections of the coast and a plan is organized to defend them by the use of airplanes, anti-aircraft artillery, coastal artillery, missiles and land units.

It is necessary to construct shelters for ships in bases and guarantee their protection (these are included under protection for the bases). It is also necessary to link the naval bases, harbors and ports up to a telecommunications system; at the same time a radar system is to be constructed which will cover the area in order to observe enemy ships and airplanes.

Ninth, training members of the public: Before we finish discussing the military aspect (preparation of the armed forces) I consider it necessary to point out that preparing the motherland for war requires training a percentage of its citizens in light weapons and certain support weapons, as is the case here in Iraq. The political command has been proficient in its workmanship in issuing the necessary orders for training citizens and forming the Popular Army, which can be assigned

the task of protecting important targets and installations in the country, although it is considered the best auxiliary for maintaining and bolstering the armed forces with trained fighting men in war.

Training individuals of the homeland must not be confined to weapons alone; rather, it is necessary to train a proportion of them in such public service activities as first aid, firefighting, rescuing people from rubble, repairing water, electrical, gas and telephone line facilities, and so forth.

C. Preparing the Nation Economically for War (Mobilization of the Country's Economic Resources--an Economic Call to Arms)

First, modern wars require great economic and financial resources in view of their exorbitant costs, since they exhaust many of the nation's economic, financial and human powers. The cutoff of most sea lanes in wartime has a great influence on the economic situation in the country, since consumer resources, especially foodstuffs, machinery, equipment, weapons, materiel and other materials required by the nation and its armed forces, are scarce and some such materials (especially if the period of the war becomes extended) might change within the country and it might be impossible to get them from outside. This shortage will influence the nation's ability to continue the war and this will require a prior review of matters and the preparation of an economic and financial plan in peacetime, as it is necessary to prepare the nation in this sphere as the armed forces are prepared. Therefore it is necessary to form a higher committee and a number of branch committees of people interested and specializing in the study of the nation's economic and financial needs and resources and to set out suitable economic studies by conducting a comprehensive survey to ascertain the number of various factories and plants in existence in the country, their productive capacities and the possibility of expanding them and substituting the production of some of them, according to requirements. The committees will also perform a comprehensive survey of agricultural and livestock production, various sources of fuel and energy, their production volumes, and so forth. Thus the various amounts of national resources will be calculated, the motherland's requirements of the various materials it and its armed forces need during the estimated period of the war will be calculated, they will be provided and stored starting in peacetime, and materials which are not easily procured in the country, which cannot be procured from abroad in wartime, or can be procured but will not meet requirements, will be imported. It is necessary to store an appropriate amount of the materials the country and its armed forces require and import from abroad, such as a special reserve of materials which are likely to be cut off because of the disruption of sea lanes. The following figures and occurrences prove the importance of storing the materials required by the nation and the certainty that sea lanes will be disrupted:

Britain and the allied countries cut off the sea lanes to Germany, Italy and Japan in the last 2 years of World War Two. In another area, the materials Britain imported in the same war were very scarce because of the submarine and air war Germany had been waging against it. Its shipping losses came to 600,000 deadweight tons a month, especially in the first and second years of the war. The allies' losses in that war came to 14 million tons, while the ships that Japan lost in the same war came to 8.5 million deadweight tons. These figures show the difficulty of providing the nation's requirements from abroad in war. Thus it is necessary to import and store them starting in peacetime, before the winds of war blow,

especially weapons, materiel, medical goods, oil and foodstuffs. In this manner, the nation will be able securely and confidently to continue the war against its enemies.

Second, the financial aspect is strongly connected to the economic aspect of the motherland. Therefore it is necessary to take exceptional financial measures before and during the war. The Austrian commander (Montkukuli) said that what the management of war needs is money, then money, and, third and last, money.

D. Preparing the Nation Psychologically for War (The Moral-Spiritual Call to Arms)

The nature of modern war demands that the nation be trained in various areas in a manner which is no less than that of the armed forces, because it, that is the war directed against it, basically, has the goal of destroying the ingredients of its life and crushing its will. This requires a high degree of control which all members of the nation must possess. It alone will guarantee that the nation preserves its power to resist and its ability to continue the war until victory. This control is built on understanding and awareness. The nation must be aware of the duties required by the war for which the nation has basically risen up. Therefore it is necessary to direct its policy so that it will be able to wage war in a manner which will assure its continued life, and it must sacrifice everything for its armed forces, which are its sharp sword, its protective armor and its true sanctuary. Its life depends upon its war capability. This means that the nation will be able to continue the war, however long it may last, and that it will be able to endure its hardships, burdens and circumstances at and behind the front and be a nation persevering before the dangers threatening it, remaining strong and united in face of them, and overcoming them one after the other. The nation will not be able to endure in war unless it is united psychologically. It is psychological unity alone which will enable it to support its armed forces with the material and moral strength so that it may work in its behalf, in behalf of the nation. In the event of setbacks in war, it is the nation's psychological unity which alone will aid the nation with the strength with which it can continue in the war smiling and believing in victory.

The deprivation and scarcity of foodstuffs, the lack of some of them, continued air raids and hostile missile strikes against the nation, the proliferation of losses, fires, the destruction of towns (especially when the enemy uses weapons of comprehensive destruction), the launching of psychological and propaganda war, and so forth--all these phenomena and matters are characteristics of modern war and natural results of it. Therefore it is necessary that they not influence the homeland's psychology and morale and that they not divert it from its determination to continue the war. Indeed, it must endure all these critical circumstances, defend its life, and continue the war until it triumphs over its enemies. A conscious nation which wants to preserve its being and its independence must bear the sufferings and tragedies of war and sacrifice what is valuable and precious for its sake.

Mobilizing the homeland psychologically for war depends on many things, the most important of which we list below:

First, the media: The media are considered among the main instruments that participate in preparing the nation psychologically for war. They are not used just to guide the nation and its armed force psychologically but are also used in waging

the psychological and propaganda war the enemy has launched. They must also be used to fight tendentious rumors and therefore they must be properly directed to achieve the psychological coherence and unity of the nation, raise its morale, spur it on to offer sacrifices and bear the conditions of war and accustom it to a life of asceticism and deprivation. Among the most important media which must be mobilized in order to unite the nation psychologically are:

Radio agencies, television stations, movie theaters, plays, anthems, songs, music, books, magazines, newspapers, wall posters, publications, pictures, cartoons, the presentation of speeches, poems, directives and so on.

Second, making members of the nation understand that it is the enemy that started the war: It is necessary to make every member of the nation understand through the media (at the beginning of the war) that we are not warmongers, that we did not commit aggression against anyone, and that it is the enemy who started the aggression against us for no reason. Therefore it is necessary for every member of the nation to forget ideological and personal disputes, grudges and so forth during the war, melt himself into the crucible of the nation, and exert all the personal power and resources he can at and behind the front for the sake of crushing the enemy and achieving victory. This kind of sacrifice is expected of individuals only if they are convinced that the political leadership has pushed the nation to war to defend its life (the life of the nation). The political leadership must rely on the nation, support its armed forces with all the nation's powers and resources, and during the war apply traditional laws, the most successful means for forging the nation and managing the war and policy.

Third, psychological war: When the enemy follows techniques of psychological war against a nation, he must be answered with the same techniques of psychological war.

Fourth, talking frankly with the nation about the truth of situations: It is necessary to talk frankly with the nation about the truth of situations, even if they are bad, but in a manner which does not influence morals and at the appropriate periods.

The issuance of successive statements on situations in brief periods negates the factor of security; on the other hand, the issuance of such statements over long periods paves the way for hostile fifth columns, the discontented and the vindictive to launch rumors which impair determination and defeatist propaganda which circulates in the ranks of the nation as fire circulates through dry grass, especially if the homeland is not alert and its armed forces have failed in a battle or on a front. Therefore it is necessary to take the necessary measures to prevent that.

Fifth, the elimination of grumbling and dissension: It is necessary to avoid anything which has the effect of creating grumbling and dissension among members of the nation and not to give despair free rein to filter among the ranks of the nation; in fact, it is necessary to do everything which will have the effect of unifying it, consolidating its ranks and uplifting its morale and its fighting spirit.

Sixth, the elimination of fifth columns: It is necessary to purge the ranks of the nation of hostile fifth columns, destructive persons, objectors, defeatists and vindictive people, and keep close watch on suspicious persons. The failure to take

measures against these people will give them an opportunity to infiltrate into the ranks of the nation, then weaken it so that finally it will be exposed to collapse and capitulation.

Seventh, the political leadership: In my opinion, this is to be considered the most important element in competent, sincere political leadership distinguished by bravery and determination, which places the higher national interest above every consideration and serves the nation sincerely and with self-sacrifice. It is this kind of leadership which creates psychological unity and victory for the nation and then is worthy of winning its trust so that it will place all its material, human and moral resources at the command of its political leadership.

E. Civil Defense

Wars in the modern era are not restricted to battlefronts alone. Rather, they encompass the hinterland of the country participating in the war and its inhabitants and territory, since (as is well known) it is in the capacity of enemy airplanes and missiles to strike any target lying in the remotest area of the country. Indeed, missiles can strike any target in the remotest areas of continents, even with nuclear warheads. Therefore it is necessary to take all requisite measures to lessen the effect of these weapons and reduce losses. These measures are known as civil defense. The measures and activities civil defense embraces in a country preparing for war are very numerous and are interconnected. It is necessary to carry some out in peace, while others are carried out in war. In general, civil defense includes the following:

First, defense of important targets: The defense of important targets is a task of the armed forces. Therefore, the military command must set forth an integrated plan to protect these targets in all areas of the country and the occupied areas of the enemy's country as well (if it is stipulated that they are to be occupied and used), and allocate the units and weapons necessary for protecting them. The degree and type of protection depends on the importance and nature of the target, the nature of the area surrounding it, the type and degree of the danger threatening it, its proximity to or distance from the field of action of enemy air and ground units, the range of missiles, and so forth.

It is necessary to devote particular attention to the protection of projects and factories of weapons of comprehensive destruction because if they are hit by enemy weapons that will not just mean their destruction but will also constitute a danger to the inhabitants of the area. Therefore it is necessary that these be constructed in areas that are remote and isolated from public roads and inhabited areas and that it be difficult to distinguish and hit them (nonetheless, they will be exposed to discovery and destruction by enemy missiles). Rolling hilly areas are very suitable for the construction of these. It is necessary that these important projects remain hidden. Important targets such as the following can be camouflaged: reactors; special plants for weapons of comprehensive destruction; various energy sources, in particular oil installations, refineries, fuel pumps and tanks; mines; generators; electric machinery and plants; special war plants and factories; dams and irrigation projects; airports, air bases and landing fields; naval bases, harbors, ports and ship shelters; radio and television stations; railroad stations and locomotives; tunnels; straits; important bridges and barrages;

government headquarters (the political leadership); armed forces headquarters, grain depots and storage areas for provisions; sample storehouses; main warehouses; hospitals; radar equipment systems; telecommunications networks; and so forth.

These targets may be exposed to one or more of the following hostile activities:

Ground raids, air strikes, air attacks, strikes by missiles (ordinary or nuclear), heavy artillery bombardment, nuclear-chemical-organic strikes, and acts of sabotage (activities of hostile fifth columns, discontented persons, saboteurs, grumblers and so on). Thus, the requisite units for protecting these target will consist of anti-aircraft weapons, airplanes and balloons, an appropriate infantry force (which can be bolstered by some support weapons such as mortars), armored vehicles (tanks, armored cars, armored personnel carriers), anti-tank weapons, various mines, barbed wire fences, booby-traps, anti-tank trenches, and so forth. Naturally a force and weapons will be allocated to all targets according to need. While it is not necessary to allocate part or all of the weapons mentioned above to each target, it will be necessary to provide a network of radar equipment to cover all areas of the country. It will be necessary to provide telecommunications systems for units assigned to protect these targets, assign the necessary officers for these, issue clear decisive orders and recommendations on opening fire and means for distinguishing between ours and enemy aircraft and provide them (the officers) with all feasible information on the enemy.

Second, passive defense: The activities and measures included under passive defense are many and important and require prior review of matters, organization of a carefully studied plan and exercise of the plan in sequence. Otherwise, the nation will sustain great, indeed critical, losses of life, property and vital installations in the country.

1. Preparation of shelters for the population: In order to reduce losses resulting from enemy aerial bombardment, missiles and long-range artillery, it is necessary to erect shelters to protect members of the nation. Constructing these for the inhabitants of all towns will require a long time, great effort and large amounts of money, and priority in their construction should be given first of all to major towns with a concentration of population because they are more exposed to air and missile strikes (especially if they are industrial) than other. In their construction, care should be given to put them in areas of high population density, such as areas where there are factories, plants, public markets, railway stations, mosques, schools, institutes, colleges, residential buildings, movie houses and other public places. The government will continue to build more of them, the more it is able to, especially since the population is constantly growing. Basements that are well constructed (with concrete) will guarantee good protection against air strikes; therefore, it is inevitable that the government will build shelters in accordance with a carefully studied plan and will not permit the construction of any building, factory, plant and so forth without a basement. It is also necessary to construct basements in government buildings, schools, institutes and so forth; on the other hand, it is possible to use underground train areas and tunnels as shelters.

2. Public services: In wartime, public services in a country are afflicted with heavy losses as a result of enemy air raids, especially if weapons of comprehensive

destruction are used; in order to ascertain the extent of the destruction which befalls towns and their inhabitants and installations as a result of war, and to ascertain the importance of public services, it is worth pointing out some examples of that as follows:

The atomic bomb which the American air force dropped on the Japanese city of Hiroshima on 6 August 1945 cost the Japanese about a quarter of a million dead, wounded and afflicted and destroyed about 62,000 out of a total of 137,000 houses. The second atomic bomb the American air force dropped on the city of Nagasaki on 9 August 1945 cost the Japanese about 24,000 dead and 123,000 wounded. The air raids the German air force launched against London on 16-17 April 1942 cost the British 6,000 dead and wounded and destroyed a large number of houses. The air raids allied aircraft launched against the German city of Hamburg one night in 1945 cost the Germans thousands of killed and wounded and the destruction of a large number of houses. Because of the enormity of the losses and damage, various rescue and first aid units and technical workers were lost, and, for the first time, control over the public facilities in that city, which were not able to perform their duties until the following day. The importance of public services in wartime is clear from these terrible losses and this frightful destruction. Therefore it is necessary to prepare and form the necessary units to repair or replace destroyed sections and make up for deficiencies in various public service installations and equipment, because they are vital for the life of the nation and it cannot sustain its armed forces if it is not in a good, strong position. The most important public services are:

A. Electric power sources: It is necessary to repair any destruction befalling electric power sources or any part of them without delay, because any delay in repairing them will lead to a shutdown of factories, plants, transformers, electronic equipment, water projects, hospital equipment, especially equipment for operations and other services, and so forth. Therefore it is necessary to prepare staffs and increase repair units, distribute them among important areas, and outfit them with the necessary means of transport so that it will be feasible for them to repair damage as soon as possible.

Burying electrical wires in the ground and constructing reinforced concrete buildings for electric turbines and plants are very important and necessary and must be attended to starting in peacetime.

B. Firefighting: Many extensive fires occur in various sections of towns (especially flammable targets) because of air raids, the activities of saboteurs and so forth. Therefore it is necessary to increase firefighting detachments, prepare firefighting machinery equipment and the necessary materials and distribute them (the detachments) among areas where it is most probable fires will break out. It is also necessary to increase water points (fire hydrants). The success of firefighting detachments in performing their duties will depend on speed of action, and it is possible to guarantee that by equipping the detachments with telecommunications equipment, having the individuals in them get to know well the areas of the town in which they work, providing them with firefighting equipment, especially specialized vehicles, and training them in them thoroughly. It is necessary to organize a mechanized firefighting system in every residential building, plant, factory, government headquarters and so forth.

C. Clearing out the wounded: Enemy air raids will result in the infliction of very great losses, which will be terrible in the event the enemy uses weapons of comprehensive destruction. This will require many hospitals, doctors, and paramedics, large volumes of various types of medicine and large numbers of air conditioned first aid vehicles.

The successful evacuation of the wounded depends on two principles, speed and precision. Therefore it is necessary to devote attention to these, although it will take the presence of first aid vehicles and medical detachments in areas remote from hospitals in order for it to be feasible to transport the wounded to the closest hospitals without delay and, in another area, to increase the number of guard pharmacies in wartime.

It is necessary to organize detachments of doctors and veterinary orderlies and enlarge veterinary hospitals to treat livestock when they are injured.

D. Water distribution systems: These systems are exposed to destruction and disruption by bombing, as is the case with the abovementioned targets. Therefore it is necessary to prepare staffs and form the necessary detachments for repairing the damage that occurs to them. The pipeline system should be buried at a good depth in the ground.

E. The sewer system: The sewer system, like other systems, is exposed to sabotage, at which point it constitutes a danger to public health. Therefore it is necessary to increase detachments for these and allocate vehicles for transporting them and carrying out their duties without delay.

F. Gas systems: For the above reasons, it is necessary to prepare the necessary detachments for repairing flowing gas lines as soon as they are exposed to damage, because gas, as is well known, constitutes a danger to the population, as it is a poison and is very inflammable.

G. The telephone communication system: It is necessary to bury telephone lines (cables) underground in order to protect them from being cut and from fires to which they are exposed from bombing and acts of sabotage. It is also necessary to prepare a necessary number of detachments to prepare damage and to supply them with the vehicles required to transport them quickly.

H. Construction of housing--the repair of bridges: It is necessary to form detachments of masons and specialists in order to rebuild houses which are destroyed by aerial bombardment as quickly as possible and to build housing complexes and erect camps to house refugees and people driven from their homes, while other committees are formed to repair bridges, destroyed barrages, railways and locomotives. Other detachments will provide clothing for refugees and the dispossessed, feed and house them, and supply them with the necessary furniture.

I. Repair of airports and harbors: It is necessary to form committees of technicians and specialists to repair airports and harbors.

J. Handling bombs--bombs which have not exploded: It is necessary to form detachments to handle bombs and incendiaries which have not exploded or have timing devices. These detachments are usually allocated from the military engineers group.

K. Saving persons under the rubble: Formation of detachments to save individuals under the rubble, since dozens, indeed hundreds of people can be buried under rubble in the course of air raids. When nuclear weapons are used, thousands of people will of necessity be buried under rubble.

Speed in saving them is very important when many of them remain alive under the rubble.

L. Observing bombed out areas: Forming detachments to observe areas which are exposed to bombing in the desire to acquire information early related to air raids, strikes with weapons of comprehensive destruction, artillery bombardment, and so forth, so that it will be feasible to make a prior review of the adoption of the necessary measures, save the wounded, give them first aid, offer them aid, prepare various detachments to repair public service facilities that have been destroyed or to rebuild bombed-out ones, and so forth, as quickly as possible.

M. Zoos: Before war, it is necessary to dispose of the animals present in zoos, especially predatory and poisonous ones, by sending them to a friendly country which is not taking part in the war, by preparing locations and pens for them underground, and so forth. Otherwise, it is likely that they will emerge from their places and inflict unjustifiable losses on the population, which are in themselves to be considered a damage.

Third, issuing guidance recommendations to the nation: In order for the nation really to be prepared for war and to reduce losses through the enemy's hostile acts, and in order for everyone in the country to know how he must behave in emergency situations and when raids occur, it is necessary to issue it the necessary guidance recommendations by means of the appropriate media, as well as preparing them from other standpoints, so that each person will know what he is to do at the time. Matters on which the directives are issued are:

1. Action when an air raid or missile strike occurs or when the enemy bombards targets with long range artillery, and so forth.
2. Action when the enemy uses a weapon of comprehensive destruction (nuclear, chemical or organic weapons), and the method for providing aid to people who have been afflicted by them and conducting first aid on them. It is also necessary to issue directives on defense against napalm bombs and aid for people who have been hit by those.
3. Saving people under rubble.
4. Action upon observing a bomb or incendiary which has not gone off or has a timing device, mines or any other foreign body and the need to provide information on it at once, point it out and prevent inhabitants from getting close to it while it is being handled by the specialized detachments.
5. The observation of suspicious persons (spies), fifth columnists, saboteurs, and disgruntled people and means for dealing with them when they try to perform any act which is harmful to the interests of the nation or when set off rumors or propaganda with the goal of weakening the morale of the nation and its psychological unity.

6. Means for fighting fires.

7. Means for performing first aid on wounded and drowning people and people who have been injured by fire.

Fourth, warning drills: It is necessary to carry out warning drills from time to time in peacetime in order to train members of the nation and get them accustomed to war conditions and methods for carrying out their tasks during them. It is necessary to drill in first aid activities, evacuation of the wounded, firefighting, repair of railways and water, electricity and telephone systems, and so forth, thereby enabling them to ascertain the extent of the preparedness of detachments and staffs and their abilities to perform their tasks. At the same time, it is possible to ascertain the extent of cooperation between members of the nation and these teams. Warnings are given in two stages as the enemy aircraft approach:

First, the stage in which people are readied to move to shelters but continue with their tasks.

Second, the stage in which people leave their places of work and residence and go at full speed to the shelters, when the aircraft are approaching the target area in which these persons are working. At the end of the civil defense period, it is necessary to emphasize the following points:

1. Providing means of transport and telecommunications for detachments.
2. Allocating special distinctive uniforms (clothing) to each of the detachments that have been assigned by the armed forces, which will wear their official uniforms.
3. The need to have the members of the detachments master their tasks and take part in specialized courses starting in peacetime.
4. It is necessary to provide the necessary equipment, clothes, maps, materials, and materiel for detachments.
5. It is necessary to benefit from relevant courses and seasoned (original) detachments, in accordance with their areas of specialization. It is also necessary to benefit from materiel, equipment, and special vehicles belonging to the private sector to facilitate the tasks of the detachments, each within their field of activity.
6. It is necessary to prepare a suitable reserve of persons for each type of detachment, various vehicles, equipment, materiel, and other necessary materials, starting in peacetime.

N. Security measures: It is necessary for a country preparing for war to take all the necessary security measures, in peace or in war, to make the enemy's spies, fifth column and media miss opportunities and prevent them from realizing their goals, which are aimed at obtaining information on the nation, carrying out sabotage, spreading propaganda and setting out rumors with the objective of weakening the nation's moral spirit and psychological unity. These hostile activities

especially rumors and propaganda, have a bad effect on the nation; therefore it is very essential to take all preventive security measures to protect the nation from the evil of these people. We list the most important such measures herewith:

First, protection of important targets and sensitive points in the country and maintenance of constant surveillance over them.

Second, maintenance of surveillance over spies, fifth columns, suspicious persons, vindictive people, troublemakers, and grumblers, whose number normally increases in war because of economic crisis and the circumstances of war the nation is going through, preventing them from meeting and prosecuting people whose guilt is established with the utmost severity.

Third, censoring publications of various types and prohibiting the issuance of publications harmful to national security.

Fourth, imposing surveillance over movie theaters and radio and television programs and mobilizing them on behalf of the nation.

Fifth, issuing intensified orders and recommendations to prevent secret (especially military) information from leaking out of official departments.

Sixth, imposing control over the movement of trains coming from and going to neighboring countries. It is also necessary to have total control over border areas in order to prevent people from infiltrating through them and keep from giving them scope for making contact with foreigners (even if the neighboring countries are neutral), except in accordance with international laws and agreements.

Seventh, controlling switchboards and imposing surveillance over the telephones of suspicious foreign persons and bodies. It is also necessary to censor radio transmissions, especially in embassies, news agencies and so forth.

0. Organizing a resistance movement: In the event of occupation of part or all of the country by the invading army as a result of the weakness of the defending army, it is necessary to follow another method for resisting the occupying enemy. Perhaps the technique of guerrilla war is the best one for imposing all possible losses on the enemy, draining away his powers, irritating him, and making terror constantly dominate him. Therefore it is necessary to organize a carefully studied plan prepared in peacetime for resisting the invading army in occupied areas. This requires the formation of chosen, trained, well-armed detachments active in resisting the occupying army in accordance with a plan that includes attacks on the enemy's camps and columns, the kidnapping of enemy personnel, the setting of ambushes, the laying of mines, the detonation of explosives in public places which enemy personnel frequent, the destruction of facilities they use such as means of communications, barrages, fuel pumps, and energy sources, and any other action which will inflict losses on the enemy and affect his war effort, while avoiding inflicting big damage on the interests of the nation as far as possible. In this manner, it is possible to weaken the enemy, impose big losses on him, affect his morale and make him anxious, nervous and unable to tell when, where or how the resistance detachments' blows will be dealt. Resistance of occupation forces by the civilian population in the passive sense, the boycott of these forces and the refusal to interact with them are a matter of extreme importance. Passive boycott, added to the positive

activities of the detachments of the resistance, will increase the vexations and losses of the forces and as a result they may be compelled to withdraw from the areas they occupy, or from some of them. The German people boycotted French units which occupied the Ruhr area of Germany, famous for its industry, in the wake of World War One, and the units met with many problems in managing the affairs of this area which as a result compelled them to withdraw from them. One should bear in mind that the German nation was in a very bad living and economic condition, which reached the point of starvation, but boycotted the French army of occupation in spite of all that. This is how a nation which wants a free dignified existence must act.

P. Administering occupied enemy areas: If the nation's strategic plan is aimed at occupying enemy territory, that will require the organization of a plan, starting in peacetime, which includes the preparation of staffs of political, administrative, military and technical personnel and assigning them to manage the hostile areas, towns and projects it is intended to take over when war breaks out so that they may dispose of and run the affairs of these areas. These measures are considered vital, planning must be made for them before war, and it is necessary to give the people appointed to administer these areas broad powers and issue clear, frank orders on them. It is also necessary to allocate a necessary number of security, intelligence and police personnel and allocate a suitable force for the purpose of controlling these areas and guaranteeing protection in the area. To facilitate the administration of it the occupied area is to be divided into sectors, each of which will be allocated to the people needed to run it, and committees will be formed from these staffs to organize matters related to the war economy and to set out plans for taking over the resources present in the area, while a special committee of experts is formed to collect surplus foodstuffs (if the situation so requires).

This issue enjoys the attention of major powers which desire to occupy the lands of countries adjacent to them. Hitler, the chancellor of the German Reich during World War Two, appointed the specialists necessary to administer the Russian area of the Ukraine before the Germans invaded it and appointed the most important persons to administer this area, such as Himmler (head of the Gestapo), Reichsmarshal Goering (head of the air force), Rosenberg (the innovator of Nazi principles and racist theories), and so forth.

Making a success of the administration of occupied territories depends on many things, the most important of which are:

First, the provision of detailed, accurate information on the areas to be occupied, especially information related to parties and various political movements, their leaders, the psychological state of the people, and knowledge of their customs, traditions, religious beliefs and so on. This information is to be obtained and coordinated in peacetime.

Second, knowledge of the volume of agricultural production and grain in storage in the area to be occupied.

Third, knowledge of the number of various factories and plants, the special function and capacity of each, the possibility of increasing them and changing their type of output, and preparation of the workers needed to operate them.

Fourth, the existence of a plan for the road and railway system, their capacity and their type.

Fifth, provision of the inhabitants' requirements, especially necessary foodstuffs, as far as possible. It is also necessary to strip them of their money and moveable and immovable property only when the public interest truly requires that.

Sixth, appointment of competent, chaste, sincere persons assigned to administer the occupied area.

Seventh, proper treatment of the population. The inhabitants of the Russian areas the German army occupied in 1941 went out to greet the victorious soldiers (the Germans) when they crossed the Russian borders, but they quickly changed from an obedient population to a harsh enemy which waged guerrilla war against the German army, and that cost the Germans dearly. The reason for this lies in the harsh treatment with which the German army dealt with the civilian population, while Field Marshal /von/ Rundsted, commander of the German armies responsible for the defense of Western Europe in 1944-45, walked about in the streets of Paris with no one to accompany him except a companion; he had issued strict orders to his armies to deal with the French most kindly and in a genuine spirit of chivalry.

Summary: The process of pushing a nation into war is not an ordinary, transitory one. It is a very serious one and has broad dimensions and horizons and decisive results, as it determines the nation's destiny. This requires that it be prepared for war in all fields before it is pushed into the furnace of destructive war.

In this article, we have managed (we believe) to present a detailed idea of the importance of and need for preparing the nation for war, and the many activities, broad measures, unremitting, continuous efforts and carefully studied, detailed plans which preparation for war requires, for action in the fields of: politics, military affairs (preparation of commanders, plans of movement, formation of a war cabinet, plan for a call to arms, training of armed forces, training of members of the populace, preparation of requirements for the armed forces, air bases, airports, landing fields, naval bases, and harbors), economics, psychological matters, civil defense, defense of important targets, passive defense, public services, security measures, organization of a resistance movement and administration of occupied enemy areas. Execution of some of these activities and procedures will start in peacetime while others are executed in war. It is natural that winning a war depends on the degree to which the nation is prepared for it. It is not possible to complete preparations and ready a nation for war from all aspects unless it is psychologically united, its ranks are closely drawn, it is sure of its political leadership and it believes in its rights. At that point it will be able to prepare itself completely for war, then wage it against its enemies confident of victory and snatch victory from them.

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WRITER DISCUSSES USE OF VEHICLES IN MODERN WAR

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 8, Feb 81 pp 43-51

/Article by Muhammad Rahumi Ahmad: "Mobile War" /

/Text/ Foreword

Many military thinkers believe that the Zionists' victory in the June war may be ascribed to their forces' superiority in the arts of mobile war and to the fact that they were distinguished by speed, mobility and good cooperation between ground and air forces.

This type of war has a long history. The use of horses by man in combat is of long standing; they were used by Alexander, Gengis Khan, Hannibal and so forth. The victories of these leaders were marked by characteristics of speed and mobility.

The victories of the Germans in the first 3 years of World War Two enabled them to reassert the value of vehicular movement. They used tanks in very large formations which can overcome machine guns and anti-tank weapons and play a big role in deep penetration movements through fruitful cooperation with the air force in striking the heads of columns and bridgeheads.

Military scientists have developed this type of war, which is based on the existence of modern armies that are concerned with advanced training and the force of arms, while preserving this force's mobility so that it will be able to use large armies. Among the people who have called for such a development are Sieck of Germany, Lidell Hart and Fuller of Britain, and DeGaulle of France. In their memoirs they have relied on an advanced technological and industrial force which is capable of supplying armies with the most modern weapons.

The Goal

A statement of the importance and requirements for the success of mobile war: I will discuss the subject under the following headings:

- A. The historic development of mobile war.
- B. The nature of mobile war.
- C. The importance of mobile war.
- D. The demands of mobile war.

E. The relationship between the Israeli-Arab war and mobile war.

F. What must be done in the field of mobile war as far as the Iraqi army is concerned.

The Historic Development of Mobile War

The technique of war among ancient peoples was simple and organized. It took place on a limited area and at that time there were no principles of war on which people could place reliance in combat. Their weapons were axes, bows and arrows and swords; some groups would raid others.

The art of war continued to develop. Horses were used in war; Alexander the Macedonian was proficient in the use of horses in his wars, making the Macedonian army able to move and sweeping over a great segment of the world. The battle of Irbil was just clear evidence of his innovativeness in this art of war. In this battle, which took place between him and Darius, the King of the Persians, Alexander used the tactics of an oblique advance, which was a successful maneuver in surprising his enemy. The penetration movement which he performed has also been the object of the amazement of commanders in the modern era. Alexander also used the cavalry as a strike force in all his battles, as modern armies now use armored units in their battles.

Genghis Khan's armies were made up of cavalry alone (except for artillery and engineers, whose equipment was carried by vehicles). There was no trace of infantry in them. They were broken down into three categories, the first comprising suicide companies whose task was to open combat, the second comprising lightning companies, which were heavy cavalry whose task was to infiltrate into the ranks of the enemy and exploit victory, and the third consisting of light companies whose task was to cover both sides and engage in pursuit. Genghis Khan devoted great importance to communications behind the cavalry, guaranteeing communications between the formations on the one hand and the army headquarters on the front and the higher war council on the other.

Genghis Khan used techniques of mobile combat, which was unknown to everyone and has remained the focus of study and comment for many long centuries. To Genghis Khan, the vital element was mobility, which he achieved by making his forces totally homogeneous. He considered the horse the best military vehicle of the time.

Cavalry was used by the great commander Hannibal in the most terrifying fashion. His wars were marked by characteristics of speed and mobility. The battle of Nisino was only one expression of cavalry war in which Hannibal made military use of cavalry, benefiting from their mobility, which enabled him to cross the Alps and sweep across Etruria.

Between 1546 and 1610 the Germans became famous for the use of cavalry in their battles, especially in movements of surrounding flanks and pursuing their enemies. This type developed totally in the time of Frederick the Great and the issue of orienting great forces against the weak side of the enemy in battle became one of the basic rules of strategy in the 19th century, when Frederick the Great used mobility as a basis for his technique in war, after turning Europe's riffraff and rabble, who had no contact with horsemanship, combat and training, into a military elite of incomparable skills.

If we look closely at the war of 1914-1918 from the tactical standpoint, we will find that it represented a development from wars of dense human concentrations to wars of combat machinery (although it has been considered a trench war). While increasing numbers lead to rigidity of defense, mechanical vehicles lead to movement, and movement means an increase in offensive power. This fact was well known between 1875 and 1913; nonetheless, the big powers piled up artillery and rifles in order to make a sweeping attack, applying Frederick the Great's statement "Winning means advancing." If they had understood the meaning of Frederick's statement, they would have concentrated on internal combustion vehicles.

The tank was used for the first time in the battle of the Somme, September 1916; the tank embraced all the characteristics of protection which fortified positions provide and in addition is a mobile offensive force bearing destructive field artillery. Therefore its appearance between 1916 and 1918 was a revolution in the art of war.

In the battle of Cambrai, in February 1918, tanks were exposed to great losses from field artillery fire when the summit of (Vellixier) was attacked. This provoked an attempt to organize cooperation between assault tanks and the aircraft hovering overhead. The attempt was a success and the war ended. As soon as the war ended, this cooperation within the British army came to an end, but it appeared in the German army; the German commanders devised the tactic of assault aircraft.

In World War Two, speed was the basis of everything that took place, speed in the penetration of defensive lines and speed in the deployment of the offense within the lines. German strategy in this war was distinguished by entailing organized mechanized war over a broad scale. The Germans spread terror and dismay in the French villages, raided railroad stations, cut off telephone communications, and paralyzed the communications and command system. It was very strange to imagine the void the Panzer divisions left behind themselves.

The French view of war was old and obsolete. The mentality of the Maginot line was implanted in people's minds during the war, while the British, in their turn, were not provided with mechanized equipment.

Thus the Germans took their adversaries by surprise at the start of World War Two by applying new techniques of war that relied on surprise, speed and cooperation among different forces. They called this mobile war, swept across many countries in Europe and terrified the world with their victories in the first 3 years. In another area, France and Britain showed their lack of interest in the new elements of combat and were dominated by a comfortable notion of defense. France sought shelter behind the Maginot Line and Britain stood behind the barrier of the English Channel, while we see Hitler building roads and supplying a communications system in order to allow the movement of his forces to increase. Gen Fuller, the British writer, predicted that the Maginot Line would be France's grave, since he found the key to defensive and offensive operations in speed and mechanized movement and considered that the defense of France ought to have been a mobile defense of the area--a mixture of maneuver, organized fire and the use of land in the desire to destroy the enemy. However, the French defense was complacent. The reasons for the defeat of France were:

- A. The failure to implant mechanized war in the minds of commanders.
- B. The absence of unity in command and unity in thinking.
- C. Their theory of war was old-fashioned and obsolete.
- D. The air force did not aim at purely military targets like bridges, mobilization areas, airports and so on. Rather, it aimed at striking at towns and civilian targets.

By this victory, the Germans managed to restore value to mobile movements, using large tank formations with organized air support, and managed to overcome such weapons as machine guns and anti-tank weapons. They penetrated defensive positions and reasserted the importance of mobile war after it had been neglected for a long time. Thus we see that the major countries gave great attention to scientific aspects, especially as concerned military science, in order to come up with the most modern weapons (the scientific developments which took place in war equipment and materiel in the past quarter century have had a big effect on military thinking). The belief prevailed that mechanized equipment helped benefit from them and that scientific improvements gave as much as they took. Modern mechanized armies acquired characteristics of firepower and mobility; at the same time, administrative requirements added to the burden of the fighting sectors. Perhaps the sole difference between the wars of the past and the present is the fact that modern wars are mechanized. Small segments of modern mechanized armies have been able to cover a distance of 100 kilometers a day in advancing or retreating, while armies in the past could not cover a distance greater than 15 kilometers per day.

The Nature of Mobile War

Mobile war is a complex of efforts on the part of man and the close interconnection of forces and every type of weapon. Karl von Klausewitz (a Prussian commander) defined war by saying "It is a conflict between interests which can be resolved only by blood. By that blood alone is war distinguished from other forms of conflict for survival. It closely resembles commerce, which is also a clash between human interests."

Ferdinand Foch, author of the book "Principles of War," considers that as with construction engineering war is part art and part science. It is not necessary that a work of construction just be imposing; its beauty is contingent on what it entails. It is, however, necessary that the work of construction be subject to the laws of mechanics and the weight of bodies, which is a science over which there is no argument. The scholar Dr Gustave LeBon defined war by saying "War is conflict which flares up between two countries to obtain political objectives and economic benefits by the force of arms." Klausewitz defined it as a political means to acquire certain ends, while Dr Sami Haninah, a professor of general international law, defined it by saying that it is any conflict which occurs between the armed forces of two or more countries if one or both have the will to end the orderly relations which exist between them. In the book on military service, war is defined as the final political means for protecting the life of a country and guaranteeing its existence while the Arab Lexicon states that war is combat between two or more countries. Taha al-Hashimi defined it as a law of existence and the battle for survival which have dominated the simple since the time of creation, and the Europeans call all movements, be they tactical or strategic, war or military activity. However, they apply the term "war" to movements which take place between the massing of forces to engage in combat and the conclusion of an armistice, while

they apply the term "military activity" to activities which take place between the declaration of a general call to arms and the conclusion of peace; the period of war is part of this military activity. From the above definitions, one may conclude that war is an end which serves to guarantee the objectives of the nation, which can be realized only by means of war after all ordinary methods have failed to do so.

All definitions are in agreement on the point that war, however expressions might differ, is a means by which a nation is enabled to achieve its wishes and goals in the shortest, most violent way.

Mobility

As regards the word vehicle, the Arabic Lexicon defines that as a mode of conveyance which moves by mechanical means in order to carry passengers, goods and everything that requires transportation, while in the book "The Auxiliary" the definition of vehicle is a familiar mode of conveyance with which people proceed to progress and it is also a conveyance moving with a motor that operates by means of gasoline or various types of fuel and generates the power to draw the conveyance along and run it at great speed.

The Relationship between War and the Vehicle

From this one may conclude that there is a very strong connection between the word "war" and the word "vehicle." War is combat taking place between two parties or countries which is accompanied by rapid mechanized movement, movement by means of horse as used by Alexander, Genghis Khan, Hannibal or others, or movement by means of modern equipment such as armored vehicles, jet aircraft, and so on, or equipment used by the Germans in the war in North Africa or World War Two.

Field Marshal Rommel was an innovator in the use of this type of conflict and he achieved the greatest of victories, which will be remembered throughout the ages in spite of the numerical and mechanized resources that were at the disposal of his adversary.

The Zionist entity made use of this kind of conflict in its war against the Arabs on 5 June 1967 and was good at it.

This type of war depends on mobility and firepower derived from total cooperation among all military classes, be they on land or sea or in the air.

Movement, which has accompanied war and become a part of it, has paved the way for the party using it to ensure one of the important principles of war, which is that of surprise through rapid movement in mobilizing and using force at the decisive point. Mobile or mechanized war is a war of rapid movement aimed first at eliminating the enemy's fast-moving mechanized equipment. It is distinguished by the following:

- A. Great abundance of fire.
- B. The ability to maneuver.

The introduction mechanical engines into armies has multiplied their mobility and power rapidly to mobilize and has increased their flexibility and consequently their ability to surprise and take the initiative. Enemy countermeasures have generally come about slowly.

The Importance of Mobile War

The pressures which modern weapons have imposed have made a shift toward mechanization in armies very essential if these armies are to make any movement at all. The war we are faced with has become more complicated, since the art of war has become firmly linked to science from all standpoints.

Wars have been totally affected by industrial and scientific development and the spread of general education; the acceptance of the era of mechanized war has been affected by the power of the people, as was seen in the wake of the wars of Napoleon the First.

As wars took place, they proceeded to evolve. Gunpowder appeared, lead appeared, excavation works and fortifications were used, mobile defense made its appearance, movement from place to place came to resemble a tortoise shell, and the tank emerged during this period, causing a revolution in the art of combat. Aircraft became a giant instrument of war and by cooperating with tanks managed to carry this revolution a great distance, in a manner which had not been witnessed throughout all the stages of military history. Improvement in all the instruments of combat continued at bewildering speed with the rapid progress in civilization, and modern armies came to possess the capability for mechanized combat characterized by speed and mobility.

Today's armies possess tremendous firepower and the mobility which modern vehicles, airplanes and the scientific innovations which have been introduced into weapons used in the tactical arena, as well as other equipment, have guaranteed. They have opened new horizons before modern armies to embark on limited wars which are distinguished by exceptional speed and firepower. For this reason we see that among the ingredients of mobile war are:

A. Mobility

Mobility, of the tactical and strategic types, is a vital factor in winning victory in war because it is the means for achieving a mobilization of scattered forces at the point of impact by the most economic means.

Mobility in World War Two made it possible to use great force anywhere without significant delay. It contributed to the attainment of security. There occurred the preparatory air raids launched by aircraft carriers in the Pacific preceding amphibious landings for the purpose of destroying Japanese aircraft which would otherwise have been sent to defend the external point being assaulted. One can ensure mobility by the following means:

First, movement by air. It is possible to transfer the units of an entire division in a few hours.

Second, movement by water. Water equipment can in specific circumstances be the best means for insuring mobility.

Third, movement by land. Here it is possible to make use of means of land transport, mechanized armored vehicles and all other equipment.

The following principles of war (resistance, surprise, security, economy of force and cooperation) can be realized only by vehicular movement carried out on land, whose central feature is mobility. Alexander's wars were distinguished by mobility, which was a major factor in his victory over Darius, the king of the Persians, about 2,300 years ago.

B. Firepower.

The firepower accompanying mobility is considered a major, important ingredient in mobile war. One can ensure such power through total cooperation among the arms of ground, air and sea forces in order to decide any battle by mobilizing this auxiliary force at specific places and times. Silencing fire in the field of combat is considered one of the most important elements affecting the morale of troops, which is generally at a high level in the party which uses it in an effective manner and at a low level in the other party.

Firepower has great effect in guaranteeing good maneuvering. Firepower is considered the mistress of combat, and there is no doubt that battles are won by fire and movement. The goal of movement is to carry the fire through to the most secure positions of the enemy in order to affect him and destroy his morale. There cannot be too many projectiles in any battle; it is of little importance whether they are launched by artillery, missiles or recoilless weapons since the purpose in all these instruments is the same, to drown the enemy in fire. It is not necessary to launch these projectiles on the ground either; sustaining the rate of use of firepower against decisive targets of the enemy will eliminate his resources, cause him to lose his balance and consequently will lead to collapse.

C. Speed.

Speed is considered one of the elements aiding the effectiveness of mechanized forces in transforming conditions on the field of movement. This effectiveness has also led to expanding the field of movement, especially in the hinterland.

The introduction of motors into armies has multiplied their mobility and flexibility and has increased their ability to mass at the desired speed.

Speed is considered one of the most important elements in surprise and a necessary condition for offensive action. Slow forces cannot launch an attack and expect that it will succeed; indeed, in their totality, they cannot be an adversary of value. By speed or deftness of movement I do not mean rapid movement--I mean the ability to act with greater speed than the enemy has anticipated. The factor of speed has increased with the development of technology and military science and has come to be characterized by flexibility, which means material deftness of movement, high intellectual and moral ability and a high competence in quick acclimatization to the field, in accordance with the extreme speed of changes in combat situations.

The Demands of Mobile War

The development of arms and equipment and the devising of new combat methods have played a major role in preparing this sort of war. The modern tactical notions arising from the design of modern weapons and equipment are to some degree close to a general conception of what the situation in nuclear combat will be. The techniques of mobile war impose the following demands:

A. Organization.

First, mobile war does not take place unless it is accompanied by deep penetration movements that make it possible to pass beyond peripheral elements to aim at the command or conduct a maneuver aimed at severing the enemy's lines of communication and destroying his supply bases. This can occur only if there is mobility and the factor of speed, fortified by great firepower.

Second, modern armor and air power are considered classes which give a more complete dimension to this type of war. Although other factors and groups play a big role in the prosecution of this kind of war, the air organization plays a major role in dominating the field of combat through first strikes, by taking the initiative and paralyzing the enemy air force so that ground units can carry out their task as thoroughly as possible.

B. Armament and equipment.

First, air power.

In modern war, air power plays the main role in getting ground units to perform their tasks in order to reach their objectives; it also helps the ground forces by transporting some of them to the battlefield and guaranteeing air superiority over the area of movement as well as providing direct support in combat, carrying out transport activities within the combat area and guaranteeing a system which can be relied upon for forward supply. Air power is also used in operations of evacuating the sick or wounded. Air power also plays a great role in deep transport movements. Therefore it is necessary to take care to establish tactical air forces to support ground units.

There are views and theories on the use of air power. Among them are people, headed by the Italian general (Gillo Doppa), who believe that air power must be organized as a deterrent force in order to eliminate the enemy's resources in a decisive fashion and wrest victory by itself. There are people who believe that it is necessary to balance its organization in order to use it as a support force for land movements; foremost among proponents of this view is the British general Fuller. Past experience has proved that both theories are of importance in war. Destroying the war machine in the enemy's support area in depth and crushing the morale of enemy personnel are basic matters, and supporting ground forces and enabling them to help us with airpower are indispensable matters.

Second, armor.

Activity on different types of ground requires a suitable group which can guarantee rapid movement on such ground. Armor is the group which can ensure this goal and

transcend the obstacles ground forces encounter when they pass over such ground. Modern war requires this sort of equipment and in addition guarantees a strong position capable of destroying hostile armor and armor distinguished by light weight and great speed and movement.

Third, infantry.

For us to be able to make the infantry group capable of keeping abreast of the activity of armor in mobile war, it is necessary for us to mechanize it through the use of modern transports which guarantee fruitful action with armor and mutual support. This type of equipment is considered a basic requirement of mobile war, enabling us to achieve a deep thrust. We must also provide the fighting man with personal equipment which will be light and portable but will not affect his physical capability.

Fourth, artillery.

Artillery, as a mechanism, cannot keep abreast of mechanized cavalry and armor while operating off roads; therefore, in order for us to be able to guarantee fire support for units, artillery must move by itself so that total cooperation will take place in fire support over the broadest range.

Fifth, engineering.

Engineering is an important army group. Thus it is necessary that this class fulfill its duty as thoroughly as possible, in order to keep up with the groups mentioned above, by making it an armored engineering force capable of keeping up with the war activities of the other groups.

C. Competent leadership.

Even if the element of mobility is present in modern war, a very important element is still required without which one cannot insure victory, and that is the element of leadership.

All commanders and military thinkers agree that armies will not acquire victory unless their forces are provided with competent leadership. Thus the element of command is firmly connected to high morale, firm discipline, advanced training and good equipment and armament, so that we can ensure the basic goal, which is victory. Competent leadership is considered one of the most important elements in raising morale and strengthening the spirit of discipline. The importance of superiority of leadership is apparent in particular when the two belligerent parties are equal in terms of morale, discipline, training and armament. In this case, the will of the opposing commanders stands out and in this case victory is contingent on the personality of the commander. History is full of clear evidence of the great role leadership plays in achieving victory. Hannibal enabled the Carthaginians to triumph over the nation of Rome and the Arabs were victorious though they were smaller in number than the Persians and Romans when Khalid ibn al-Walid commanded them. Had it not been for the genius of Rommel, the German victory in North Africa in 1940-41 would have been impossible.

D. Training.

Modern war is in great need of advanced training, physical fitness and exceptional skill in the use of modern weapons and equipment.

Training is an important element in achieving the demands of modern war, and this is achieved through individual and group training curricula. Joint exercises also have a great effect in reaching the requisite level in training.

E. Administrative training in mobile war.

Modern war is developing rapidly and is changing from moment to moment, especially with the use of nuclear weapons and missiles. Therefore, sound administrative planning, control of administrative affairs, and the adoption of sound, decisive, quick decisions effectively help win victory. Indeed, management of combat from the administrative aspect might be the basic element in winning a battle. The real stage of planning to prepare supplies and reinforcements must start in peacetime. It is an important stage in outfitting armed forces to enter the operational stage. Peacetime means before the battle and planning during the preparatory battle and the operation itself.

F. Intelligence.

Intelligence agencies have been created to help commanders achieve surprise and protect them from enemy surprise by obtaining information on the enemy, examining it, verifying it, arriving at useful conclusions, then preventing the enemy from obtaining conclusions concerning our units. Frederick the Great said "If it is always feasible for us to have a chance to learn of the enemy's intentions before he embarks on them, we will always prevail over him, even if his force is superior to ours." Klaus Vietz said, "The essence of the measures taken in war and the activities which go on in war are the information and news received regarding the enemy."

The pursuit of intelligence in mobile war requires ability, knowledge, technique, boldness, skill and competence. It also requires the preparation of groups which might exceed the force of the army in number and must be of high intellectual ability. Intelligence is the continuous effort to penetrate the fog which hovers about war and diplomacy so that we can sketch out plans for tomorrow in full confidence. This effort will give us room to move.

G. Reconnaissance.

Reconnaissance is considered an important element in ensuring surprise. The fundamental rule is that effective, constant reconnaissance takes place at all times, night and day, and in all directions. All classes must conduct reconnaissance during combat and concentrate in particular on points of contact, flanks, and other important targets which have a relationship to our future plans or the enemy's probable intentions.

H. Communications.

In mobile or modern war, communications are considered to be direct factors of success in any battle which can be waged in rapid mobile war. If radio, television,

telegraph and telecommunications equipment, visual equipment, messengers, long-distance communication and code are not at a high level of competence and extremely up-to-date, the result will certainly be failure.

The Relationship between the 5 June War and Mobile War

On 5 June 1967, the Arab nation was faced with an organized, precisely planned Zionist imperialist aggression aimed at all our armed forces. The aggression started with a rapid, lightning air attack on the air bases and airports of the United Arab Republic; then /the enemy/ moved the weight of his air forces against the west bank of the Jordan River. After the West Bank was liquidated, he redirected the whole weight of his forces to Sinai, and, after destroying all sources of fire, directed part of his forces against Syria and occupied the al-Zawiyah area and the heights of the southwestern front.

The Zionist forces, in their war against the Arab armies, used full cooperation between ground and air forces; the air force performed its task in the most thorough manner and rapidly achieved the following objectives:

- A. Striking out at bases and airports and destroying them and the aircraft lying on the ground.
- B. Striking out at transport and communications centers.
- C. Affecting the morale and harming the spirit of the commanders in the field.

Thus we consider that in the face of rapid mechanized attack, many other factors which might play a role in war are eliminated.

The Zionist entity brought its latest war outside the scope of combat on the domestic front and emerged from the scope of its basic defenses; on top of that, these occupied areas constitute a security belt for the vital points within it. Nonetheless, it was compelled to distribute its forces over areas remote from the center, and its strategic reserves also became extended, therefore now compelling it to embark on a long-term defensive battle which will certainly lead to the draining of its forces and the destruction of its morale.

From this war, one may observe that the Zionists prepared for it and acquired correct information through their intelligence, enabling them to embark on a rapid mechanized war which was successful as a war but failed in terms of achieving an objective. The technique the Zionists followed in their war was:

- A. To acquire a suitable political position.
- B. To mobilize mechanized and armored units with extreme secrecy.
- C. To prepare a large number of airplanes with which Arab units were taken by surprise.
- D. To prepare a large amount of small airplanes spread about through Palestine.
- E. Movement was accompanied by an intense propaganda campaign which concentrated on civilian population along with barbaric, terrifying acts directed against the population with the goal of expelling it from its homes and impeding the Arab war effort.

F. Spreading chaos by disseminating conflicting rumors on the collapse of the Arab resistance and achieving a cease fire after the callup of all the reserves in the Zionist army.

The political, economic and geographic circumstances of the Zionist entity do not enable it to engage in a long-range war, and this makes it mandatory that it program a system of rapid short-term war, on the one hand; on the other, its strategic plans are based on shifting combat outside the old armistice line so that it can avoid the destruction, damage and suffering of war.

These two facts demand before all else the presence of a very strong air force which will, in conjunction with its other forces enable it to snatch victory in a decisive, rapid manner with the fewest possible losses, as occurred in the movements in Sinai in 1956 (Kadish). The enemy devoted much concern and attention to the air force, establishing suitable bases, airports and landing fields in specific densities, connecting them to a good communications system to guarantee speed and flexibility in use, and establishing an air radar system covering its skies to guarantee early warning.

Conclusion

From the discussion of the research, one may conclude that mobile war is as old as man. It was applied by such great commanders as Alexander, Genghis Khan and Hannibal, whose victories were distinguished by speed and mobility.

They used cavalry in a manner and with strategic maneuvers whose use is still the object of amazement and admiration on the part of commanders in this era and is still being discussed in military academies at the present time. Mobile war was used in World War Two by the Germans, who realized great victories in the first 3 years. They used armor against cavalry and applied strategic maneuvers, penetration, movements of surrounding the enemy flanks, and establishment of the front; in their fighting they made a specific target of the command, in order to destroy the morale of the enemy troops.

In order to prepare a mobile army to wage modern war with the enemy, it is necessary that the ground forces be organized in the form of enormous brigades. Their equipment and armament will include rapid lightweight tanks with powerful artillery, modern armored personnel carriers, self-propelled artillery and artillery which can be dismantled. It is also necessary that the units contain armored engineering elements and rely on organized air power in the form of a strategic air force and a tactical air force. The forces must contain advanced, flexible administrative structures. Mobile war requires a competent command functioning under the worst conditions. The harmonization of organization is of importance in the preparation of such a force.

Scientific improvements give as much as they take; modern mechanized armies have acquired the characteristics of firepower and mobility, and the development of machinery has improved much non-tactical movement. The air, sea and mechanized transport behind the tactical field cannot be compared with that of bygone times; it has become in the capability of modern armies today to move whole formations to the remotest areas in a period which is almost not worth mentioning, in comparison with the past.

Comrade fighting man: Remember that military discipline is one of the basic elements on which the success of the Popular Army is founded, and be careful to commit yourself to it so that you may be a true mirror by which the true picture of the Arab fighting man is reflected.

Comrade fighting man: Rumors are a destructive weapon used against you and against your party and country by the fifth column and colonialism to weaken your morale. Make haste to inform the people responsible for you of every rumor along with the names of the people propagating them.

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THEORY, PRACTICE OF LAYING MINES DISCUSSED

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 8, Feb 81, pp 122-124

/Article by Thamir Khudayr 'Abbas: "Military Culture: Minefields" /

/Text/ Minefields are considered the most effective major artificial engineering obstacles and the ones most able to impede progress and attack. This type of obstacle was used on a broad scale in World War Two. The Germans were proficient in the use of mines, applying innovative methods in this field, thanks to their industrial advancement and the establishment of specialized study centers for instruction in and development of minelaying methods. Thus minefields became elements in preparing terrain for defense.

The Importance of Minefields

The purpose of minefields is to impede hostile advance and attack, limit the movement of attacking units, affect their morale, lead them into selected combat areas and guarantee protection for the defenders with the objective of gaining time.

The importance of minefields lies in the fact that they are major obstacles in the field of defense to impede attackers. In principle they are laid for protection against attack by infantry and tanks, against attack by airborne and air-transported units, and against amphibious assault operations, providing protection from and limiting sudden attack, impeding invading units, preventing them from carrying out deep penetration and infiltration or rallying around defensive positions, and also increasing and providing immunity for forces in defensive positions. Minefields are laid in engagements to conceal the front and flanks of forward units after a successful attack and the occupation of territory, and one can use minefields in crossing operations to protect bridgeheads from counterattack following the crossing of the first wave.

Minefields have a moral and material effect on the invading force in the two stages of attack and pursuit. As regards other obstacles, natural and manmade, minefields achieve surprise, can work quickly and easily, and from the standpoint of cost are considered economic.

The war of mines used by revolutionary movements has been of extreme importance in destroying the enemy's force, draining him morally and materially, and creating a state of fear, anxiety and lack of security on his rear and on his lines of communication.

The Power and Inhibiting Nature of Minefields

The power and inhibiting nature of minefields depend on the density of the fields, that is, on the number of mines laid on every meter of the front of the field. The power and density of the field are subject to a number of essential matters:

The purpose in using the minefields.

The barrier plan.

The degree of protection required of the field.

The availability of mines to be laid and the persons laying them.

The method of laying the mines.

The nature of the terrain.

Defending units' ability to cover the minefield with fire and protect it.

The nature and armament of the enemy.

Types of Minefields

Minefields consist of an area of land in which mines are laid. They do not have a specific form--they have numerous characteristics, such as anti-tank minefields, anti-personnel minefields, or mixed fields. The main types of these fields are:

Protective Minefields

These fields are laid to help units acquire local protection for themselves by affecting and impeding enemy attack, setting the enemy organization into confusion, and providing the defenders an opportunity to repel and overcome attackers and influence them with close-range fire until early warning is given of the enemy advance.

Defensive Minefields

These are fields which are laid to prevent hostile infiltration among defensive positions, strengthen their defense, confuse the enemy attack, and make the breaches less weak in terms of the defense of the whole area.

Barrier Minefields

These are fields which are laid to repel attacking units. They are in front of the position, on the flanks or at the rear and have the objective of directing the enemy toward selected killing zones and diverting the direction of his advance, for the purpose of launching a counterattack against him and destroying him.

Nuisance Minefields

Nuisance minefields are laid to impede and confuse the organization of the attacker, delay him and prevent him from using a specific zone or road. They are laid on roads where he will probably advance during the early stages of the defensive fighting in order to delay him. In retreat, minefields result in slowing down the advance of the attacker and weakening his morale.

Illusory Minefields

These are false fields which have not been laid with mines. Their purpose is to deceive the enemy, to make an area of land seem to resemble a field which has been laid, thus saving time, effort and mines.

Ways of Discovering Mines

The following methods are followed in discovering mines:

1. The method of electronic sweepers: Sweepers can discover mines quickly and are carried by single persons or connected to vehicles. These sweepers can discover mines containing a small amount of metal.
2. The method of probing and feeling: This method is used to discover non-metal mines. The mine must be felt out before the process of probing by hand, in the event anti-personnel mines are encountered on the surface of the ground.

This method is very slow and primitive.

3. Dogs: It is possible to use dogs to discover the approximate locations of anti-tank mines, be they metal or non-metal and buried at slight depth. One cannot use dogs in forward combat areas because they are affected by the din of battle.

Methods of Crossing Minefields

The mines are cleared out after use of the methods of discovery noted above by securing and raising the mines. Other methods are used in crossing minefields, among them:

1. The use of snake charges: These are special devices made up of hoses filled with explosives that are set off by a rocket engine inside the minefield. The explosives are spontaneously detonated when they hit the ground, causing the clearing of a safe road for the passage of machinery or a passageway for infantry, according to the type of charge used.
2. The use of bangalore torpedoes: These are special devices consisting of standard pipes filled with explosives that are buried at little depth by hand in the minefields or wire barriers to open a safe passageway and seal off the explosives by suppression.
3. Mechanical methods: A number of methods can be used for clearing out minefields, among them:

A. Mine detonators: These consist of devices connected to forward tanks for the purpose of clearing mines across the field.

B. Tanks with chains: These consist of arms connected to the tanks and hooked up to a revolving axle containing metal chains which beat the ground and result in detonating and cleaning out the mines.

C. Bulldozers with blades and plows: These deal with mines that have been buried, pushing them to the side; they are then secured and subsequently raised.

4. Artillery fire and air force missiles: Artillery or mortar shells are used by concentrating the cannon or mortars on a limited stretch of minefields during the final stage of preparatory bombardment and also by using air force missiles fired from planes. Among the bad features of this method is the fact that not all the mines that the shells dislodge from their locations explode and pits are created in the area of the breach which might obstruct the movement of offensive equipment. In addition, it is not economical.

5. The use of rubber shoes: These consist of a rubber sack which is filled with air and worn by persons effecting the crossing. These work on the principle of distributing the weight of persons over a broad spot of ground.

6. The method of burning the ground. This is done by burning grassy land by using inflammables like napalm and certain chemicals, so that the mines explode in the areas harboring them, as a result of heat, so that consequently the area is cleared of mines.

7. The human method: This method is used by moving attack units through minefields and accepting losses resulting from the detonation of the mines. From reports by certain military study centers, it has been established that the losses this type of method causes do not equal the losses which are likely to occur through the use of snake charges and torpedoes, the consequent drawing of enemy attention and the discovery of the crossing spot, or through the directed enemy fire to which units are exposed when they retreat on coming up against mines.

8. Disturbing the air: This method is based on disrupting the air over the minefield, causing the detonation of mines in the area. This is done by firing explosives through missiles by means of firing apparatus carried on a truck that directs a group of missiles toward the minefield. When they crash to the ground they generate a cloud of materials which explode, generating a pressure and force which result in the explosion of the mines. In this manner one can open a passage-way 12 meters wide and 1,000 meters long in a minefield.

9. The use of chemical foam: This entails the use of a mixture of a number of chemicals which resemble foam. They have the ability to harden quickly, producing a rubbery layer.

10. Water under pressure: The mines are eliminated by directing hoses with water under pressure at the site of the mines, which results in exposing them and undercutting them. This method was used by the Egyptian Arab army in the October 1973 war to eliminate the mines that had been laid before the Bar Lev Line on the bank of the canal.

The last few abovementioned methods are not considered basic or general minefield clearing operations, since some of them have recently been introduced into some armies and some others are used on a small scale. One can consider that the manual and mechanical method, the use of explosives (charges and torpedoes), and artillery and aircraft fire are the methods that are in wide use in minefield clearing operations.

Evidence of the Existence of Mines

One can determine the existence of mines by observing the following evidence:

1. Traces of occasional mines, such as piles of stones or empty cans.
2. Disruption of the ground surface, especially on roads and grassy areas or the strewn of moist soil in scattered form over grass.
3. Footsteps and vehicle tracks on stiff plants, suggesting the presence of mines.
4. High and low wire obstructions.
5. Partial or total blockage of roads, compelling vehicles to turn off the roads and automatically head toward the mine area.
6. Empty mine containers and packages and abandoned safety pins.

Preventive Guidance:

When operating in an area which contains mines, it is necessary to observe the following preventive measures:

1. Keep your eyes open at all times in all your movements and distrust every natural or manufactured object which seems incompatible with its surroundings.
2. Expect constant change in enemy methods of laying mines and mines of different types.
3. Point out every mine you have secured or observed and give notice of it immediately.
4. Do not rush forward to help people who have been injured in minefields--instead, follow the proper rescue sequence.
5. Always remember that any mistake you make will result in taking the life of your comrade as well as your own life.
6. Do not let the enemy arrive at his objective by thwarting you in any action as a result of your coming up against certain mines, since it is possible to be rid of the mines by following correct instructions.

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METHODS OF CLEANING OUT FORESTS, BUILT-UP AREAS DISCUSSED

Baghdad AL-JAYSH AL-SHA'BI in Arabic No 9, Jun 81, pp 32-35

/Article by Ghazi Mahmud al-'Umar: "Cleaning out Woods and Fighting in Built-up Areas"/

/Text/ 1. Foreword

In some stages of combat, it often by chance happens that you will skirmish with the enemy in a forest or orchard or that an airborne enemy force will become concentrated in some forest or orchard on our territory. Thus, in both cases, it is necessary to clear out this forest or orchard.

2. The Objective

To train and instruct fighting men in the method for clearing out forests.

3. Principles of Clearing out Forests

A. Speed: It is necessary to emphasize the principle of speed in surrounding a forest or orchard with fire. This comes essentially from speed in the fighting man's movement with the aim of putting the enemy in a situation where it is impossible for him to escape or save himself.

Among the useful weapons in this procedure are light machine guns.

B. Accuracy: Accuracy here arises from the accuracy of the fighting men's movement and accuracy of fire as well, in addition to the need to observe the enemy's fire and movements within the forest.

4. The Sequence of Action

A. The commander of the advance unit must choose an appropriate place, as an observation point, to investigate the forest and determine the approach for cleaning it out, while observing the following points:

First, the probable enemy target.

Second, the shape of the forest.

Third, the killing zone.

Fourth, the wind direction and its effect on smoke.

B. It is necessary to set out barriers to facilitate the activity of liquidation squads which will be in effective areas on both flanks of the forest.

C. The force commander will request the group of commands, which in general embraces commanders of liquidation and support squads, ambush commanders (mobile force), and mortar detachment commanders.

5. The Course of Activity

A. First barriers bolstered by light machine guns will be sent. Their positions will be on the edges dominating the exits and the hinterland of the forest. They will move with the support of liquidation and mortar squads.

B. The ambush squad (mobile force) will then be dispatched. Its site will be in an appropriate location in the hinterland of the forest. These people's movement will be with the support of the barriers, in addition to the liquidation squads.

C. Normally, the forest is broken down into two or more sections, according to the size of the forest or orchard, and squads are distributed and assigned to tasks in the light of this breakdown. For example, the task of the right-hand liquidation squad will be the right part of the forest or orchard, that of the other liquidation squad the left side of the forest or orchard, the right-hand support squad will follow the right-hand liquidation squad, the left-hand support squad will follow the left-hand liquidation squad. This is what is called the distribution of tasks. The forest or orchard can be broken down into stages, for instance the first stage, the second stage, and so forth.

D. The liquidation squads will move simultaneously, that is, after the barriers and the ambush take their place with the support of mortars.

Smoke may be used for the purpose of facilitating the task of advancing the liquidation squads.

E. The liquidation squads must move with extreme care and slowness. Their advance will be in the form of small groups or pairs. As soon as the enemy appears, fire will open at once and the fighting men will move from cover to cover, and so forth.

F. In the event resistance occurs, causing the liquidation squad to stop, the support squad will attack through the liquidation squad or it may group around the enemy along one of the flanks if the situation is favorable for that, in order to eliminate the enemy.

G. The barrier and ambush squad will pursue and kill the enemy flushed out by the fire.

H. The support squad following behind the liquidation squad must observe the trees above the liquidation squad out of fear that the enemy may have hidden himself in the tops and branches of the trees.

I. It is necessary to use smoke screens before the forest in order to cover the forward liquidation squads approach operation.

6. Conclusion

It is necessary to stress the principle of speed and care in such movements, because they are of the utmost importance and it is not permissible to neglect them whatever the reasons might be.

Fighting in Built-up Areas

1. Foreword

Fighting in built-up areas (that is, in streets and towns) is to be considered one of the most difficult types of combat because of the great losses borne by invader and defender alike, in addition to the great difficulties of providing fire and administrative support for the force assigned to such combat. Nonetheless, good training and determination and high morale in the fighting man will guarantee the attainment of victory.

2. The Objective

Training and instructing fighting men in combat in built-up areas.

3. Among the most important problems the fighting man encounters in such combat are:

- A. Surveillance is limited because there are no broad fields of fire.
- B. Movement outside buildings by day is extremely difficult and the attacker sustains flagrant losses in such cases. Thus night guarantees freedom of maneuver.
- C. Movement of vehicles is limited and will certainly be exposed to early attack.
- D. The fact that fighting men from both sides are in close contact certainly impedes the air and artillery support process.
- E. Fighting men on both sides can make use of cellars, sewers and roofs to infiltrate, maneuver and withdraw.

4. Among the most important conditions for bolstering the success of the attacking fighting men are:

- A. Good training starting in peacetime.
- B. High physical fitness and endurance.
- C. Preparation of fighting men as marksmen distinguished by accurate, rapid fire and cool nerves.

D. An accurate, simple, flexible administrative plan guaranteeing the conveyance of materiel and provisions for the fighting men, as well as evacuation.

5. Among the basic difficulties which stand out in such combat is control of the fighting men. We can overcome this problem as follows:

- A. A simple, flexible plan.
- B. Clear goals.
- C. Decisive orders.
- D. The presence of commanders in forward positions.
- E. Definition of responsibility for groups and bases and the assignment of spring-boards.
- F. Good communications. It is possible to use couriers.

6. Techniques for Attacking Built-up Areas

There are three methods for attacking built-up areas. These are:

- A. Fighting from street to street and house to house. This technique of course causes great losses.
- B. Bombardment of the built-up area by artillery and the air force first, then invasion and liquidation of the area by fighting men. This method requires the performance of accurate coordination, competent communications and high skill in setting forth and executing the plan.
- C. Surrounding independent units then liquidating the built-up area with fighting men or other units.

7. The Means for Cleaning out Houses

It is well known that the combat squad is the smallest liquidation unit. It can be broken down into two parts (two squads), the liquidation squad and the cover squad:

A. The liquidation squad: This can consist of a group commander and be equipped with a radio set in addition to the following: The first entry person (combatant). The second entry person (combatant). The grenade firer, who carries hand grenades.

A surveillance and observation element (overseer combatant), who carries a rocket launcher.

B. The cover squad: this may be composed of a light machine gun squad in addition to the other combatants in the squad.

8. The Method of Liquidation (That Is, the Method of Cleaning out Houses)

A. As soon as the forward squad (the attack squad) confronts enemy fire, it takes cover behind the cover which is nearby. Some squad combatants keep enemy snipers busy.

B. The force commander issues orders for carrying out the mission.

C. Then the cover squad--that is, the light machine gun group--springs forward and takes a suitable position enabling it to support the liquidation squad.

D. The liquidation squad surges forward under the protection of the cover squad toward the house set aside for liquidation. The grenade firer throws grenades through the openings of the house into the rooms. After hearing the explosion of the grenades, the first entry person goes into the house, exploiting the walls of the house in his movement. After he has entered he signals for the other persons in the liquidation squad to come in. The task of one of the combatants in the liquidation squad entering must be to observe and conduct surveillance of the roof of the house, preferably carrying a rifle. The surveillance and observation element (the overseer combatant), who is carrying a rocket launcher, then gives the agreed upon entry signal for the cover squad to enter the house, and thus the liquidation and examination of all facilities in the house are carried out.

E. It is best not to enter the house by the main door and it is best for the liquidation squads to enter through the sides of the house or the rear garden if possible.

F. After the cover squad has entered the house and cleaned it out the light machine gun must be put on the roof of the house to be prepared to support the liquidation squad assigned the task of subsequently cleaning out the other houses.

9. General Observations on Cleaning out Houses

It is necessary to observe the following while cleaning out houses:

A. Avoiding storming the house or the building from the main door as much as possible.

B. The rear garden or rear doors offer ease of assault and surprise, that is, offer the liquidation squad facilities to enter and clear out the house.

C. Your assault of rooms (the rooms of the house) must occur 1 second after the explosion of the grenade.

D. It is necessary not to be extravagant with fire. Rather, follow the rule "shoot to kill."

E. Avoiding movement in the room or hallway or in front of windows. Rather, move alongside the wall, pressing your back against it and examining all directions with your vision.

F. It is necessary that the combatant's movement from one place to another not take place without the support of one of his comrades.

G. Beware of traps for the negligent. Do not turn on a light switch or water faucet or touch a picture or anything in the house at all.

H. After the liquidation and occupation of the house, all its installations will be re-examined carefully.

10. Conclusion

This type of combat is difficult and complicated. It is necessary to prepare the combatants starting in peacetime, train them in this type of combat, and instill in them the spirit of determination and high confidence in themselves and the weapon.

It is also necessary to stress the setting out of accurate, simple, flexible plans to achieve the desired objective, which is victory.

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END

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22 Sept 1981